

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

A SIMMONS-BOARDMAN PUBLICATION

Vol. 46.

CONTENTS FOR JANUARY, 1929

No. 4.

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Published on the first day of each month by American Builder Publishing Corporation. *Chairman of Board*, Edward A. Simmons; *President*, William A. Radford; *Treasurer*, Henry Lee; *Secretary*, Roland D. Radford; *Assistant to Chairman*, William A. Radford, Jr.; *Editor*, Bernard L. Johnson; *Eastern Editor*, Charles G. Pekar; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcombe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement.

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SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

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Construction Speed means building economy

WITH all the versatility of concrete as a building material, it requires time to gain sufficient strength to bear heavy loads. In many cases this means delays costing thousands of dollars while overhead goes on.

But now the Missouri Portland Cement Company offers the builders of America a new magic in speeding construction — Prestolith Velo Cement — which makes concrete you can use in 24 hours and practically eliminates one of the most costly forms of building delay.

Not the least remarkable feature of Prestolith Velo is its price. The Missouri Portland Cement Company is able to produce it at such

a comparatively low price that the slight addition to the ordinary cement bill is negligible in comparison to the great saving in time which Prestolith Velo effects.

The introduction of Prestolith Velo to the building industry indicates an inherent capacity for engineering service which has had a vital part in the rather unusual growth of the Missouri Portland Cement Company.

It represents an absorbing interest in the improvement of construction methods and materials which has prompted the investment of ability and money in the most exhaustive and conclusive tests of Prestolith Velo in the laboratory and in actual work on

a commercial scale over a period of five years.

And it represents the vision of complete usefulness which has caused, as a result of these tests, the building of a new \$2,000,000 plant at Prospect Hill, St. Louis, for the exclusive and adequate production of Prestolith Velo.

Write for our interesting booklet, "24-Hour Cement."



This is the emblem of the authorized dealer in Prestolith Velo and Red Ring Portland Cement. Through him, as the representative of the Missouri Portland Cement Company, is available the advice and engineering assistance of this entire organization.

MISSOURI PORTLAND CEMENT CO.

ST. LOUIS • KANSAS CITY • MEMPHIS

Manufacturers of Red Ring Portland Cement, Prestolith Velo Cement; producers and distributors of sand, gravel and Bethany Falls crushed stone.

MISSOURI PORTLAND CEMENT CO.
1311 Telephone Building, St. Louis, Mo.

Please send me, without charge, your descriptive booklet, "24-Hour Cement."

Name.....

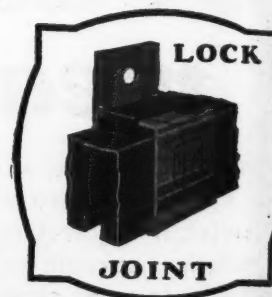
Firm.....

Street and No.....

City..... State.....

Unobstructed full

Slidetite Door Hardware



There
ware
and a
Write

width openings!

No dangerous center posts!

Slidetite takes care of any size garage doorway openings up to 30 feet and requiring as many as 10 doors—yet no center posts! That one feature alone puts Slidetite in a class by itself.

Slidetite doors shut tight—absolutely weatherproof! They open and close as easily as the doors of your car—never stick, can't sag, swell, or shrink. No matter how deep the snow may be outside it can't interfere

with Slidetite doors because they open inside—and no matter how strong the wind is blowing, Slidetite doors cannot possibly blow shut.

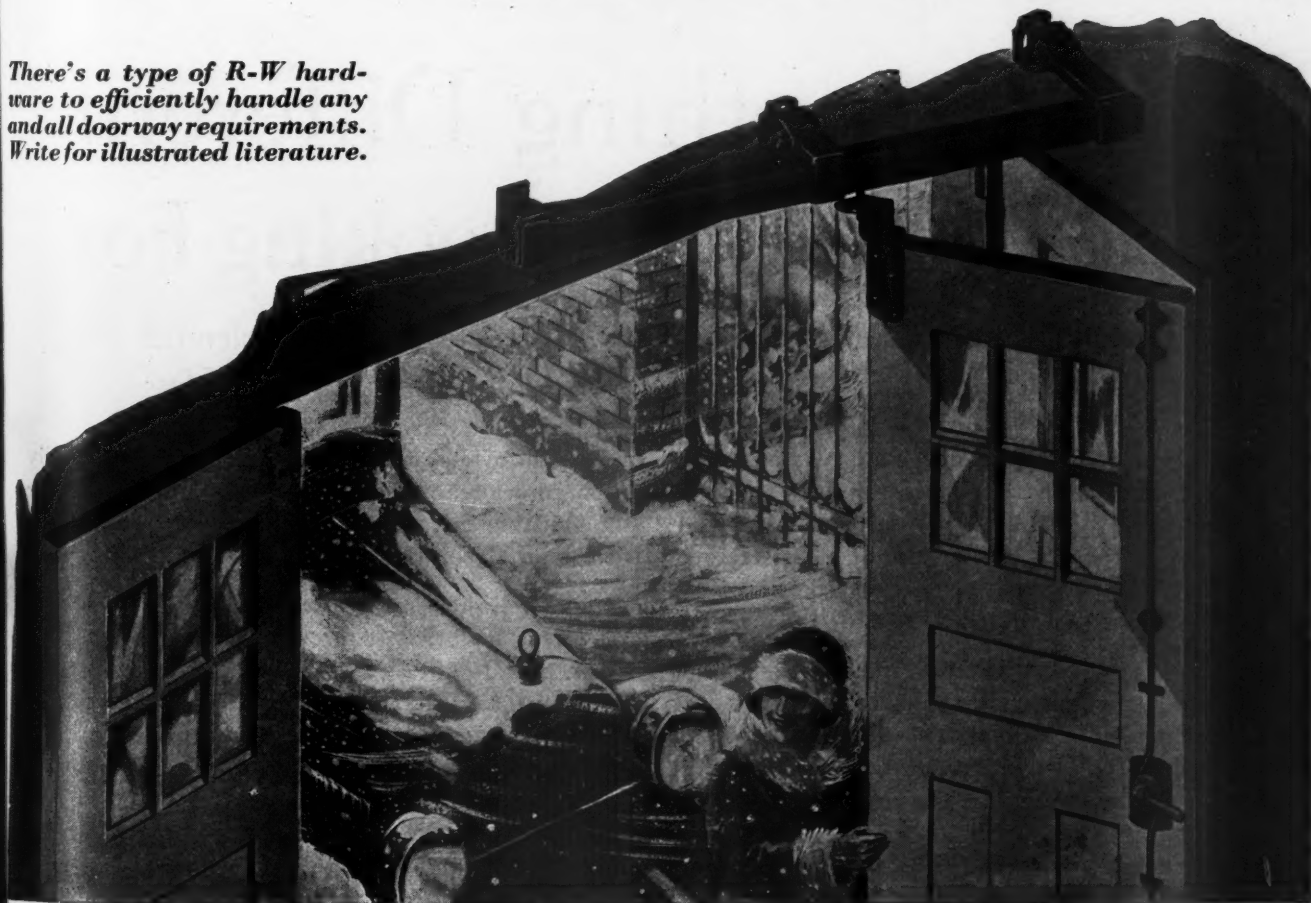
Like all R-W hardware, Slidetite equipment is always dependable in performance and invariably lasts as long as the building stands. That's the whole story—economy, comfort, convenience, safety.

Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides

New York . . . AURORA, ILLINOIS, U.S.A. . . . Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
 Montreal . RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. . Winnipeg

There's a type of R-W hardware to efficiently handle any and all doorway requirements. Write for illustrated literature.





*Residence, Memphis, Tennessee. Sieg & McDaniel, Architects
Built of Variegated Indiana Limestone Random Ashlar*

That "Something Different" Style Home You're Looking For

Indiana Limestone Random Ashlar construction offers a splendid opportunity for the live contractor. Send now for FREE Booklets

THIS tells you about a new kind of stone construction. One that produces houses of amazing beauty and big sale appeal, yet so economical and rapid that contractors can be sure of a satisfactory profit. Our free booklets fully describe this new way of using Indiana Limestone. Write for them today.

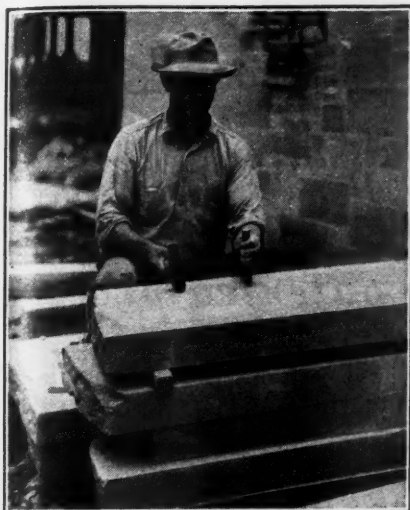
In the new stone construction, Indiana Limestone sawed into strips four inches thick is used. We prepare the stone this way at the quarries, sawing it on four sides: face, back, top and bottom; then ship it directly to the job. There it is jointed and laid up

in the wall by a stonemason or bricklayer. Carefully prepared drawings are not necessary. No expensive stone-cutting is required. The only cut stone used is for trim. Even this may be omitted.

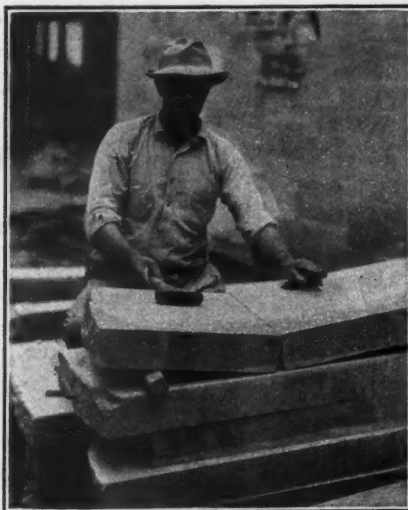
Indiana Limestone prepared in this way is used as a facing for brick or tile. Sometimes it is applied as a veneer to stud-frame walls. It is then secured to the wall with galvanized metal ties, the same as a veneer of face brickwork. This form of wall construction is quick, simple and effective. Results of unusual beauty are obtained.

INDIANA LIMESTONE COMPANY, General Offices: BEDFORD,

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Breaking Indiana Limestone for Random Ashlar with aid of coping tool. A tap with a mallet breaks it cleanly on a line with a groove made in the face of the stone



The groove is cut in the face of the stone with a portable electric carbide-rundum saw, or an ordinary hand saw may be used. The stone is turned over and broken to the length desired



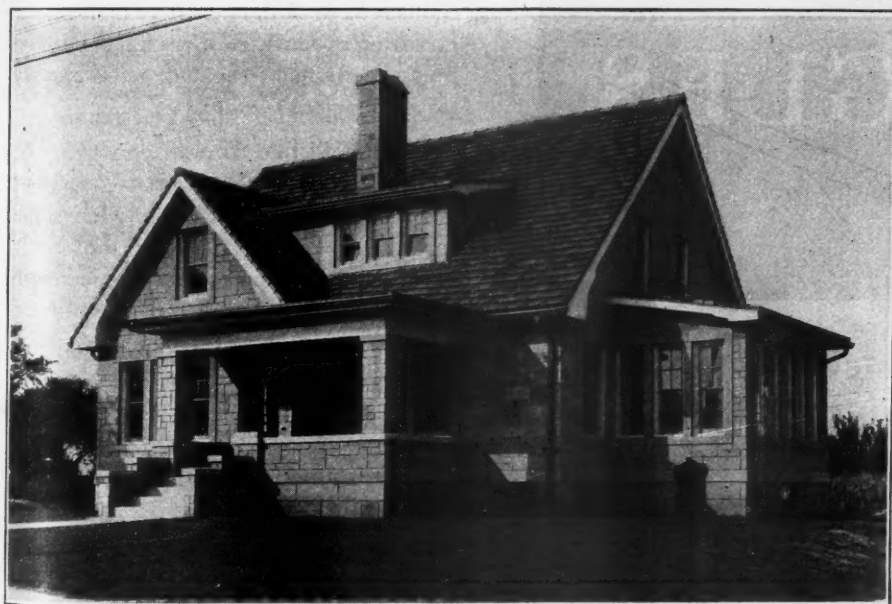
One man is able to keep as many as six stonemasons or bricklayers busy laying up stone. Your masons spend all their time on the wall. Construction moves along at top speed

Cost is only 5% to 6% greater than when some less desirable material is used. In the long run, Indiana Limestone facing is no more costly than any other building material. It remains beautiful year after year without attention.

A single house will advertise you as no other construction you've ever engaged in has done.

We are ready to help any reliable contractor get started in using Indiana Limestone. Our big organization has branch offices in all principal cities.

Let us send you at once all the facts about the use of Indiana Limestone. You will be under no obligation. We can show you how easy it is to get into this attractive field.



Residence, Bedford, Indiana. Frank Williams, Architect
An example of Random Ashlar construction in a residence of moderate cost



Free!
See below

Fill in your name and address on the coupon below and mail at once. Booklets and full information will be sent to you immediately.

FILL IN, CLIP AND MAIL

Box 757, Service Department,
INDIANA LIMESTONE COMPANY,
Bedford, Indiana.

Send me full information on Indiana Limestone for Random Ashlar facing for residences.

Name.....

Street.....

City..... State.....

The resale value of Indiana Limestone houses is much greater than is the case with less permanent construction. Prospective home owners quickly realize this. It explains why Indiana Limestone residences are easy to sell and bring attractive prices.

There is an opportunity for a live contractor in every community to start building with Indiana Limestone Random Ashlar. It is so different that it will put you out of the class of ordinary competition.

INDIANA • Executive Offices: TRIBUNE TOWER, CHICAGO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The greatest improvement ever made in STAINED SHINGLES

Five advantages over every other stained shingle

- 1 HEATED STAIN. Preserving oils kept thin and volatile, like the heated motor oil in your car.
- 2 CONSTANT AGITATION. Patented beaters washing this hot stain back and forth—keeping the color pigment in solution.
- 3 PRESSURE. Pounds of air, forcing preserving stains evenly into each square inch of shingle surface.
- 4 35% MORE COLOR. Actually 35% to 40% more color pigments by weight, adding years of future loveliness.
- 5 RE-INSPECTION. Each individual shingle inspected and re-packed by hand, to make sure it conforms to Creo-Dipt standards.

CREO-DIPT

Stained Shingles

STAINED UNDER PRESSURE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Creo-Dipts now stained under pressure by patented process

AS every builder knows, stained shingles have always been *dipped* in the stain—a primitive, clumsy method at best.

Now Creo-Dipt has perfected a startling improvement. Creo-Dipts are *stained under pressure*—submerged in heated, agitated stain, while compressed air forces preserving oils and colors into the shingles.

A tremendous advance! Improvements that took Creo-Dipt engineers five years to perfect—that add many thousands of dollars each year in manufacturing expense. And yet Creo-Dipts—pressure-stained—*come to you at exactly the same price as before.*

We should like to mail you *free*, our regular 25c portfolio of photographs of Creo-Dipt homes, together with some interesting examples of new roof treatments and old homes rebeautified with Creo-Dipts laid right over the old siding. Also we want to be sure that you have an up-to-date color booklet showing the wide range of Creo-Dipt colors. Won't you write us today for anything you need.

Creo-Dipt Company, Inc., 1450 Oliver St., No. Tonawanda, N. Y. In Canada: Creo-Dipt Company, Ltd., 1610 Royal Bank Bldg., Toronto, Ont. Factories: No. Tonawanda, N. Y.; Kansas City, Mo.; Minneapolis, Minn.; Vancouver, B. C. Sales Offices in principal cities. Look for *Creo-Dipt* in your phone book.

© C-D Co., Inc., 1929

Let's
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Moreau.

This KILLS Weird Ideas about SANDERS

What CLARKE says has GOT to be TRUE

*It's backed by
the Only Definite, Written
Guarantee of Performance
Given by any SANDER*

Let's get down to BED ROCK about Sanders. Sand off the sales talk and learn exactly WHAT the machine itself IS GUARANTEED to do.

You can BE SURE that the Clarke does just what this ad says BECAUSE IT IS BACKED BY A DEFINITE, WRITTEN CERTIFICATE—WITH 60 DAY MONEY BACK GUARANTEE if it fails to do EVERYTHING stated here.

Read the facts. They're printed in the panel at the right. No fancy, colorful statements. No impossible pictures of what MIGHT be done but actually CAN'T be done by you. Just the common ordinary MEAT of how much work the Clarke does, how it runs off a light socket, how you can carry it around.

In twelve years of making portable sanders (we built the first successful one made) we've never sold a Clarke on any other basis. No misleading 5 or 10 day trials. Use the Clarke 60 DAYS. If it doesn't do all we say, get ALL your money back.

ACTUAL PERFORMANCE, not CLAIMS, is what makes profit for you. Get the FACTS about the Clarke and learn why it's adding to profits for wise contractors in every city in the country. Send coupon at lower right. No cost or obligation. Mail it today.

The CLARKE will do these things for YOU

"The Clarke has been absolutely satisfactory from the first stroke, but I knew it would be before I bought it," says O. C. Owsley, Eclectic, Ala.

"I am absolutely positive in my assertion that the Clarke has no rival in its performance of quality or quantity work. I am ready at all times to recommend it to any one desirous of buying a sanding machine," says A. M. Koelsch, West Bend, Wis.

"Remarkable! I can't begin to say how remarkable the Clarke is. It is the fastest machine I ever saw and the easiest to handle. I really believe a child could run it and do efficient work. I am thoroughly satisfied with 'My Clarke' and would not part with it for a million of the old fashioned sanders," says Gabe Moreau, Presque Isle, Maine.



The Clarke Works in Tight Places

Sands so close to walls that the baseboard and quarter round covers what's left. Handle is instantly detachable for work in closets and "tight" places.

Read These Certified Statements of Performance

- 1 The Clarke Vacuum Portable Sander finishes 800 to 2,000 square feet of new floor in 8 hours.
- 2 It refinishes 300 to 1,000 square feet of old varnished floor in a day without the aid of varnish remover or neutralizer.
- 3 It finishes floors to unequaled smoothness—barely brushing the surface or hogging a heavy cut.
- 4 It works so close that baseboard and quarter round covers what's left. Works in closets and small places. DOES THE WHOLE JOB.
- 5 It is dustless in operation, with powerful built-in vacuum. It handles almost as easily as a vacuum cleaner.
- 6 It operates from a light socket. No special power line needed.
- 7 You can carry it anywhere, in street car, roadster, or walking, with one hand.



Get the Guaranteed Facts FREE

Clarke Sanding Machine Co.
Dept. A-31 3815 Cortland St., Chicago, Ill.

Originators, and for 12 Years, Manufacturers
of Portable Sanding Machines

Non-Obligating Request for Facts



CLARKE SANDING MACHINE CO.
Dept. A-31, 3815 Cortland St., Chicago, Ill.

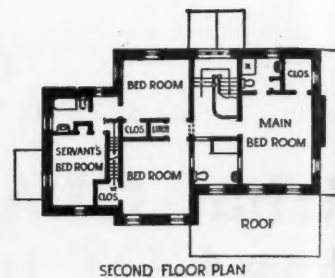
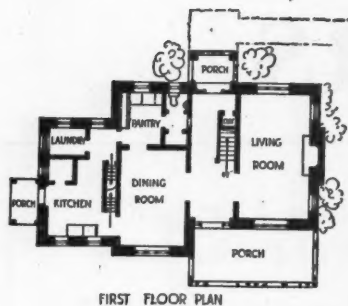
Yes, I want the facts about the Clarke Vacuum Portable Sander. Without obligation, please send them to me.

Name.....

Address.....

City.....State.....

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Carl A. Zeigler, A. I. A.
Architect

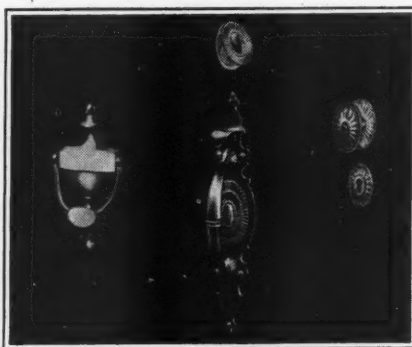
FOR THIS \$20,000 COLONIAL RESIDENCE

Sargent prescribes three appropriate designs of hardware

THE BEST HARDWARE IS A SIGN TO PROSPECTIVE BUYERS OF EXCELLENCE
OF EQUIPMENT AND CAREFUL CONSTRUCTION THROUGHOUT

MANY considerations enter into the sale of every building—design, construction, equipment, conveniences. Buyers are ever more demanding, looking for and insisting on the best. Sargent Hardware is widely recognized for its beauty of design and its excellence of construction.

Sargent designs are authentic, lending themselves perfectly both to the architect's and to the home owner's aims in decoration. There is a wide variety for virtually every style and type of building.



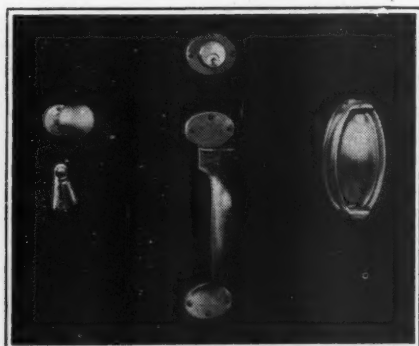
Door Knocker No. 7, Door Handle No. 2561,
Door Knob No. 1912 KA, with Rose No. 164 KA,
Key Plate No. 870 KA

Put Sargent Hardware in all your buildings. Call it to the attention of prospective buyers. Advertise—with your other sales points—complete Sargent Hardware equipment, the best both in design and in quality. The Sargent Hardware here illustrated is machined precisely of solid brass or bronze, permanent and perfect in its smooth and certain operation.

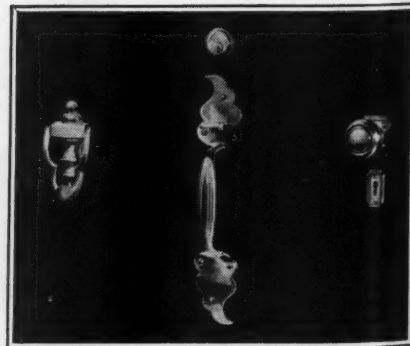
The cost of Sargent Hardware is most reasonable. The complete finish hardware equipment of this

Colonial residence costs only about 2% of the total building cost, no matter which of the designs shown you may choose. Estimates on hardware equipment, however, necessarily vary somewhat in different sections of the country.

Send for our free illustrated booklet, "Hardware for Utility and Ornamentation." It will prove interesting to you for whatever type of building you are planning. Sargent & Company, 51 Water St., New Haven, Connecticut.



Door Knob No. 1606, Key Plate No. 817, Door
Handle No. 4061, Door Knocker No. 8



Door Knocker No. 6, Door Handle No. 2561,
Door Knob No. 1822 SE, Key Plate No. 870 SE

SARGENT

LOCKS AND HARDWARE

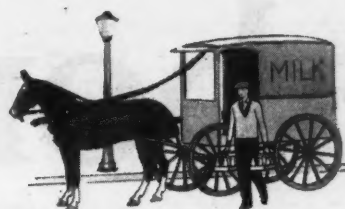
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BRONCHO BUSTER



MINER



MILKMAN



And NOW

the builder of a \$2,500,000 theatre

Milkman! Miner! Broncho Buster! Orel R. Heinz had been all of these, but he was still a long way from the high-salaried class. So he decided to take up Civil Engineering.

Long before he finished his home-study course with the International Correspondence Schools he received dividends in the form of better jobs. Even before he secured his diploma, he was making \$150 a month as draftsman.

What's he doing now? Well, he's a full-fledged Civil Engineer, and lately served as Superintendent of Construction of the \$2,500,000 Chinese Theatre in Hollywood.

"Knowledge is of two kinds," says Mr. Heinz,

"practical and technical. And right here is where the I. C. S. student has a great advantage. He gets his theory while he is engaged in practical work. I. C. S. training, in connection with practical experience, will put any man on top with the best of them."

Why don't you study, as Mr. Heinz did, and prepare

yourself to deserve a better position and a larger salary? You can do it if you really try.

At least make the start by marking and mailing the coupon printed below and find out what the I. C. S. can do for you. It doesn't cost you a penny to ask for full details, but that one simple little act may change your entire life.

INTERNATIONAL CORRESPONDENCE SCHOOLS, Box 8127-D, Scranton, Penna.

"The Universal University"

Without cost or obligation, please send me a copy of your booklet, "Who Wins and Why," and full particulars about the subject before which I have marked X in the list below:

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| <input type="checkbox"/> Business Management | <input type="checkbox"/> Bookkeeping | <input type="checkbox"/> Stenography and Typing |
| <input type="checkbox"/> Industrial Management | <input type="checkbox"/> Secretarial Work | <input type="checkbox"/> Civil Service |
| <input type="checkbox"/> Personnel Management | <input type="checkbox"/> Spanish <input type="checkbox"/> French | <input type="checkbox"/> English |
| <input type="checkbox"/> Traffic Management | <input type="checkbox"/> Salesmanship | <input type="checkbox"/> Railway Mail Clerk |
| <input type="checkbox"/> Cost Accounting | <input type="checkbox"/> Advertising | <input type="checkbox"/> Common School Subjects |
| <input type="checkbox"/> Accounting | <input type="checkbox"/> Business Correspondence | <input type="checkbox"/> High School Subjects |
| <input type="checkbox"/> and C. P. A. Coaching | <input type="checkbox"/> Show Card and Sign Lettering | <input type="checkbox"/> Illustrating <input type="checkbox"/> Cartooning |

TECHNICAL AND INDUSTRIAL COURSES

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Name.....Occupation.....

Street Address.....City.....State.....

Persons residing in Canada should send this coupon to the International Correspondence Schools Canadian, Limited, Montreal, Canada

Labor Saving Contractors' Equipment and Construction Specialties CUT COSTS *and Assure Good Work*

THE wise builder today has the right tool or machine for the right job. He knows that real economy only comes when he has the specialties of equipment which his work demands.

In the picture at the bottom of this page a workman is cutting form lumber for a big construction job, using a modern, efficient, power saw. If he had to do this same work by hand, he would have to have several men working with him to turn out the same work in the same time. With labor costing what it does today, such methods would make the costs mount to an unreasonable figure.

That is just one of the factors which make labor-saving equipment of the greatest importance to the contractor. The builder who is well equipped with labor-saving machinery not only keeps his costs down to a minimum, but he also inspires the confidence of those who are planning to build. They know that he will be able to handle the job efficiently and on time. He is able to place his bids at a figure which will return fair profit, he runs less risk of penalties due to delay beyond the contract date, and he turns out a quality of work which earns him a valuable reputation.

All this applies to a wide variety of equipment covering practically every phase of building construction. The contractor who is looking for the latest and best in equipment will have a list to consider which includes the following items:

Adding machines

Blocks and tackle

Brackets:

Roofing

Sheathing

Brick and tile clamps

Cable, wire

Calculating machines

Concrete Equipment:

Batchers, block machines, branding outfits, concrete carts, distributing towers, forms, form clamps, hoists, mixers, power loaders, salamanders, spouts, surfacers, tampers, wall machines.

Conveyors

Cranes

Derricks

Drafting room equipment

Elevators

Excavators

Floodlights

Floor machines

Hoists

Jacks

Ladders

Levels

Loaders

Mortar boxes

Mortar mixers

Motor trucks

Paint spray equipment

Power take-offs

Pumps

Rope and cable

Rules and steel tapes

Sanders

Saw filers

Scaffolds

Tires, truck

Tools—Hand: Carpenters', cement finishers', plasterers', masons', plumbers', electricians'.

Tools—Power: Band saws, drills (electric), hammers, hand saws, jointers, mortisers, routers, sanders, saw tables, utility saws, woodworkers.

Tractors

Tool cases, carpenters'

Trestles

Typewriters

Washing machines for buildings.

A wide range of equipment, it is true, but every item worthy of consideration. Manufacturers have, for years, studied the problems of building construction in a practical way. They are constantly turning out better equipment especially adapted to the

needs of the contractor, as may be seen by reference to the advertising pages of this magazine. Special attention can well be given to the equipment described in these pages which includes such items as:

Adding and calculating machines, roofing and sheathing brackets, branding outfits, concrete block machines, concrete hoists, concrete mixers, derricks, floor surfacing machines, levels and instruments, spray painting equipment, steel tapes and rules, sanders, saw filers, motor trucks, tires for trucks, band saws, electric drills, electric hand saws, jointers, mortisers, utility saws, woodworkers, carpenters' tool cases, trestles.



The Contractor Who Is Well Equipped with Modern, Labor-Saving Equipment Acquires a Prestige Second in Value Only to His Saving in Costs. Here a useful power saw is working its way.

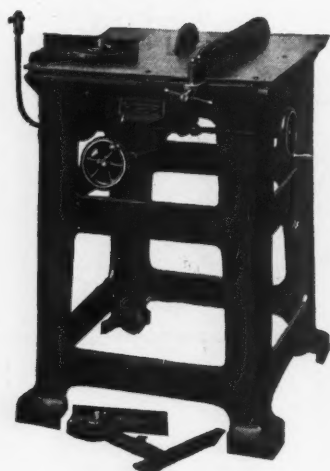


Workace Radial Saw

Amazing Low Price,
\$140

Cast Iron Table, \$10.00 Extra
Cast Iron Legs, \$15.00 Extra
(F. O. B. Chicago)

Here's a great big value in a compact, portable machine—the Radial Saw, built to handle all cutting operations, any angle, compound meters, cutoff, ripping, dadoing, tenoning, routing, shaping, fluting, boring, sanding, etc.



**Wallace Portable
Universal Saw**

A portable floor type of Universal Circular Saw that combines all the advantages of the portable bench machine and the self-contained floor type. The saw can be moved independent of its base.



Wallace
PORTABLE MACHINES

Money-making

SAVINGS of time and man-power are not all you can expect from Wallace Machines. You'll get better work using them—and more work done speedily.

Wallace Machines operate direct from the motor—no belts. Wallace Machines are so light and move about so easily that it pays to take them to the job instead of taking the work to the machine. Wallace Machines are so compact that they require little room. You can attach them to any convenient electric socket.

You can do as many other contractors and

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

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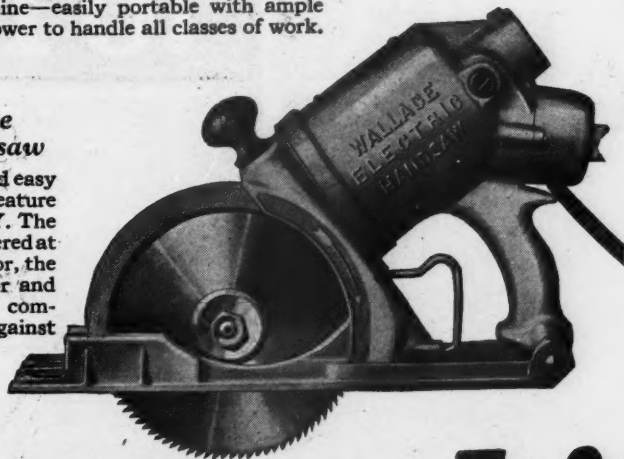


**Wallace
Bench Planer
and Jointer**

A compact and highly efficient machine—easily portable with ample power to handle all classes of work.

**The Wallace
Electric Handsaw**

is light in weight and easy to handle. Its chief feature is absolute SAFETY. The blade is entirely covered at all times. The motor, the switch, the operator and the saw itself are completely protected against injury.



**Wallace Portable
Band Saw**

Contains built-in and directly connected motor with ample power to efficiently handle work within its full capacity.



Woodworking

Individual Portable Machines

YOU'LL make a profit by applying Wallace Machines to your business. This is not an idle claim but one that we can prove in your case just as we have proved it thousands of times. The time-saving feature of Wallace Machines alone pays for this splendid equipment.

carpenters do—move your Wallace equipment into a workshop, garage or basement during slack times and turn out storm sash, screens, mouldings, cabinets and other standard woodwork. Profits you can make from this extra work alone will pay for your Wallace equipment.

Free Trial — Easy Terms

You'll find the Wallace way so much cheaper and more satisfactory than old-fashioned methods. Send for details of our proposition. We'll ship you one or more Wallace Machines

on approval. You can pay for them at your own convenience—a little each month . . . Or you can return them and the trial won't cost you a penny—not even freight charges.

Write today for illustrated catalog—free.

J. D. WALLACE & CO.,
136 S. California Ave., Chicago, Ill.

You may send me your book on Wallace Portable Machines and full details of Free Trial Offer and easy terms.

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Address _____

Thousands of DeWalts to new



*DeWalt Wonder Worker includes Table, Switch
and Connecting Cord*

are crashing through performance *and* profit records!

For over five years DeWalt Wonder Workers have been sweeping aside previous performance and profit records. Today, thousands of DeWalt Wonder Workers are "setting the pace" in every wood-working industry.

The ability to speed up construction and cut down cost has firmly established the reputation of DeWalt Wonder Workers among the country's leading builders.

We have secured some interesting "Facts and Figures About DeWalts on Many Jobs"—information of much value to you—gladly sent you on request.

DE WALT PRODUCTS COMPANY

750 New Holland Avenue, Leola, Penna.

Branches: Chicago, Detroit, Cleveland, Kansas City and Birmingham
Sales and Service in All Principal Cities

Also Makers of DeWalt Band Saws, Jointers and Mortisers



DEWALT
Wonder Worker
The Economy Wood Worker

DE WALT PRODUCTS CO.,
750 New Holland Avenue, Leola, Penna.

Please send me full particulars of the DeWalt Wonder Worker—and arrange for a demonstration on our job.

Your Name _____

Firm Name _____

Address _____

\$ 25



New

BLACK & DECKER

*Quarter-Inch
Light Duty Electric Drill*

*An unprecedented price for an electric
drill of Black & Decker quality*

*A strong,
serviceable,
general purpose tool*

*The Black & Decker Mfg. Co.
Towson, Md. U. S. A.*

"With the Pistol Grip and Trigger Switch"

PROFIT PRODUCERS

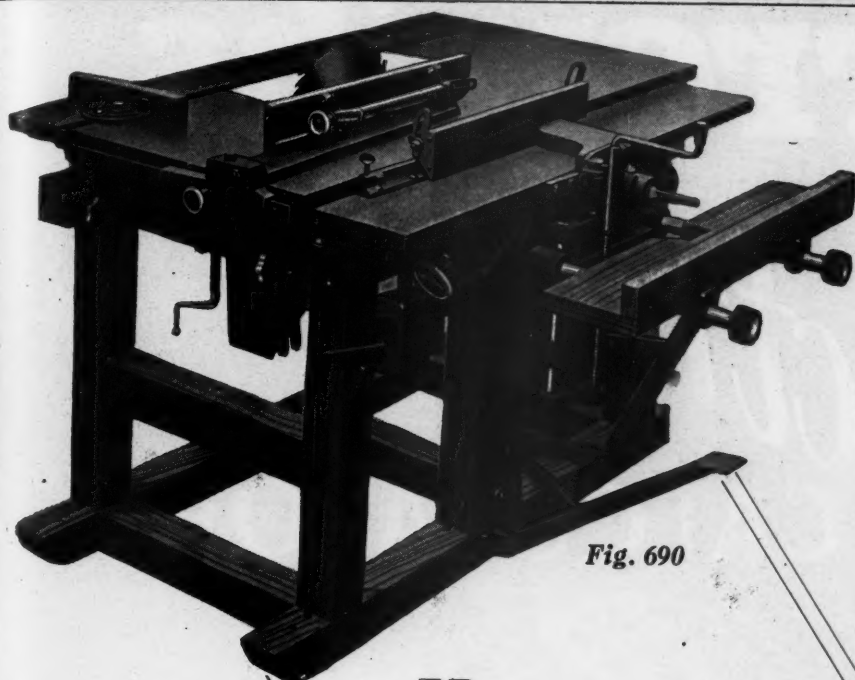


Fig. 690

No. X-19—*High grade, high speed, single spindle shaper.* Cuts, without reversing, against, across, as well as with the grain. 8400 r. p. m. spindle runs in best obtainable ball bearings.



No. X-24—*A revolutionary new machine. Tilting Arbor Saw Bench—Sturdy, compact, self-contained. Motor built in; saw completely guarded. Investigate this modern woodworking machine. Circular on request.*



No. 65—*Variety Tilt-ing Table Saw—*with motor on arbor; with motor on base; with countershaft. Each machine furnished with one saw, ripping gauge and one cut-off gauge with reach rod and stop.



HERE'S a complete wood working plant all in one machine. Can be used by four men at the same time, performing four different operations without the least interference to each other. *Compact, self-contained . . . without power . . . or with gasoline engine or electric motor. Easy to move, easy to operate, more than equal to every occasion.*

A Rip Saw, a Cut-off Saw, a Mitre Saw, a Dado Machine, a Gaining Machine, a Grooving Machine, a Rabbetting Machine, a Tenoning Machine, a Jointer or Planer, a Boring Machine, a Matcher, a Molder, a Sander, a Hollow Chisel Mortiser.

—and MONARCH qualities that ensure outstanding performance, permanency and profits for contractors and lumber yards. Let us quote you prices and tell you how the MONARCH Woodworker saves its price on one job.

Monarch

AMERICAN SAW MILL MACHINERY CO.

60 Main St., Hackettstown, N. J.

Manufacturers of a complete line of Woodworking and Saw Mill Machinery

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

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Electric

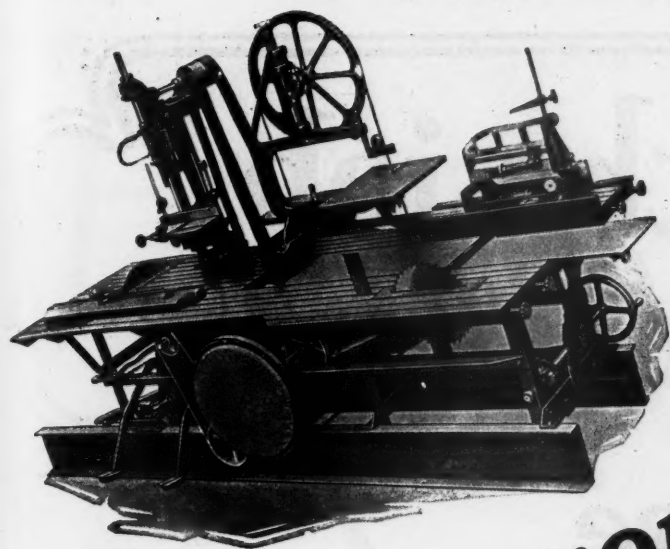
CALCULATOR

\$300

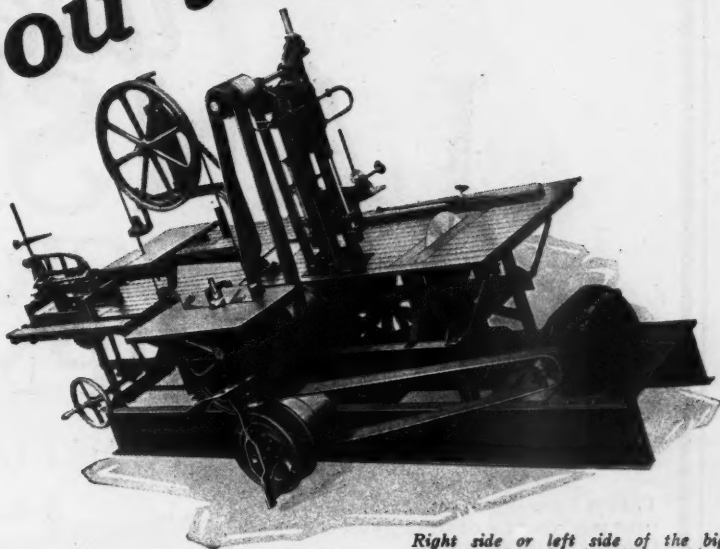
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There is no faster machine for figuring and checking stresses and strains, dimensions, areas, cubic content, time tickets, payroll, estimates, invoices, costs and all other miscellaneous calculating work.



Any way you look at it!
 the big Parks \$590
 Planing Mill Special
 is the best all-round
 machine to buy in 1929



Right side or left side of the big Planing Mill Special (8 machines in 1) shows a machine built for real work and lots of it. A complete shop in itself. 7½ h.p. runs everything. Only \$590 without motor.

There isn't a better machine on the market for the average shop than the Planing Mill Special. It takes up little space for the large variety of work it will turn out, it is built to stand the hard use of real work, and the low price is quickly paid back in labor and payroll savings. Men who try to do without machinery and men who pay too much for machines are equally handicapped. You'll find the most successful contractors are usually Parks owners with the Planing Mill Special the first choice of shop equipment. Plan now to buy a Planing Mill Special to help you do more money-making work this spring.

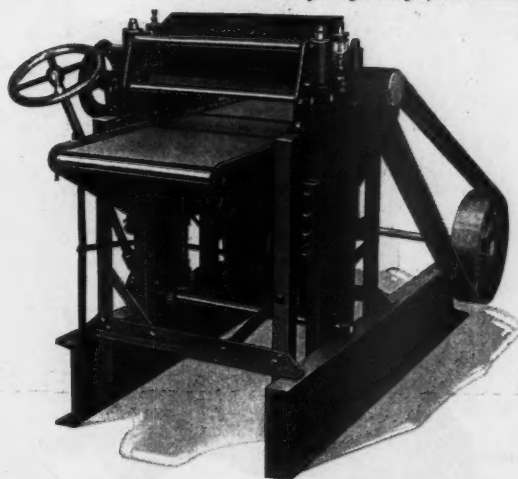
And don't forget the Parks catalog showing many other popular machine combinations as well as individual band-saws, table saws, swing saws, lathes, planers, sanders, etc., all at prices that put an extra profit into every job you do for the next ten years or more! Send for your catalog today.

THE PARKS WOODWORKING MACHINE CO.

Builders of quality woodworking machinery for over 40 years
 Fergus & C. H. & D., Cincinnati, Ohio
 Canadian Factory: 338 Notre Dame East, Montreal



Here's a 36" double drum sander at only \$450 that does clean sanding on material as thin as ¼ inch and short as 7½ inches! The steel bed plate is a new Parks improvement. 24" size Model S Single Drum Sander is only \$225.



Another heavy-duty machine every carpenter shop needs—Parks "Endurance" 20-inch single surface self-feed planer. Handles timbers up to 20 inches wide and 8 inches thick! And without bucking or strain! \$340.

The Parks "Buckeye" 12-inch Planer is a fine lower-priced machine for lighter work. \$175.

PARKS

WOODWORKING MACHINERY

EVERY PARKS IS GUARANTEED FOR TEN YEARS

to get the job
done *Early*

use
LANSGING
CONCRETE
EQUIPMENT

MIXERS \ HOISTS \ WHEELBARROWS AND CARTS

This is Lansing Mixer No. 7-S, a popular size for the ordinary run of work. Capacity of mixed concrete per batch 7 cu. ft., unmixed material 11 cu. ft. Equipped with a 2 cylinder 8 H. P. LeRoi engine. A speedy and dependable mixer.



Mixer No. 7-S

Lansing Concrete Equipment is backed by nearly half a century of successful manufacturing experience. Lansing Equipment never fails to give complete satisfaction. Buyers are assured of prompt shipment, efficient service and low freight rates.

*Write for our
general catalog.*

THE LANSING CO.
LANSING, MICHIGAN

There's a **LANSGING DEALER** in Your Vicinity

Announcing the *New* improved MASTER WOODWORKER

A new machine, the outgrowth of 15 years' specialization in the manufacture of woodworking machinery. The same reliability, quality, and accuracy that characterized the previous "Master" but new features that add still more to the amazing performance that permanently established the Master Woodworker as the leader of its field.

Bigger Profits for You!

Thousands of builders and contractors have cut down their costs and increased their income by using Master Woodworkers. They learned by experience that the Master speeds up their work, pays for itself quickly, then brings steady, added profits. The "New Master" offers even greater advantages. You will want to know more about it. Get the details at once. Send the coupon.

A Complete Woodworking Shop In Itself. Not just a Saw Rig; 12 machines in one. Performs every woodworking Operation with amazing Speed and Accuracy.

Made in 5 Sizes.

Master Woodworker Mfg. Co.

(Established 1917)

Congress & Brush Sts.,

Detroit, Mich.



Free!

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THE MASTER WOODWORKER
Congress & Brush Sts.
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Please send me Free Catalog and full information about the New "Master."

Name

Address



Whenever there is sawing to do anywhere, SKILSAW, the electric hand saw, will do it faster, cheaper, and better. SKILSAW positively

saves

**TIME
MONEY
MUSCLE**

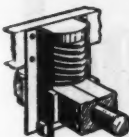
SKILSAW has the power and speed to rip, crosscut, or bevel 1", 2", 3", and 4" lumber in a matter of seconds. There are four sizes for any work. They are all easy to handle, easy to operate (from the nearest electric light socket), and safe to use.

Try SKILSAW on your own work. We will demonstrate without obligation. Just put your name and address on this coupon and mail it to us.

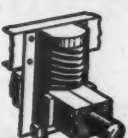
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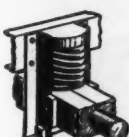
Skilsaw Inc., 3822 Ravenswood Ave., Chicago, Ill.



Spring Mounted Jaeger Mixers



for Longer Life!



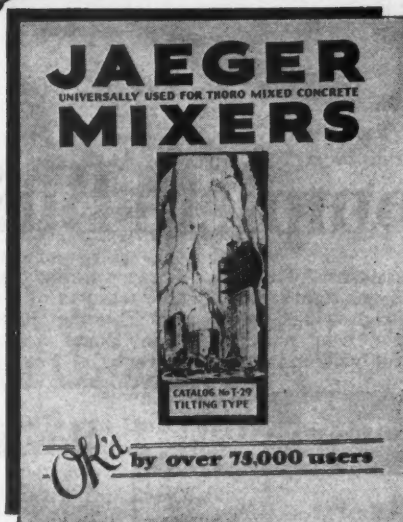

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Jaeger's Big
Catalog—
New Low
Prices



One Bag Timken Bearing Tilter at the Usual Half Bag Price

HERE'S a mixer that fits your money-making plans for 1929. It starts at the right price—a big saving. It's built to deliver more batches a day, every day of the year. Timken bearings, steel and forgings don't break down on the job. Jaeger's "Flat Spot" Drum, Accurate Measure Water Tank and Skip Shaker help mix better concrete faster than any other mixer on the market.

More than 100 Jaeger service stations can give you quick, reliable service anywhere. Standardize on Jaeger for lower mixing costs and longer profits.



SPEED QUEEN Mixer \$200 under the Market

THE fastest, stoutest, most compact mixer built on four wheels. All steel (50% stronger, ½ ton lighter), rides on springs, measures up to the famous SPEED KING for speed on the job. Has one man control, 100% ball bearing rollers and countershaft, husky 2-cylinder Le Roi for power.

The SPEED QUEEN is also built in low charge type. Get our prices and full description. It's a winner!

Automatic Skip Shaker

(which shakes loader clean without pounding), all-steel construction, the best in bearings and equipment—you get them all when you buy a Jaeger. Jaeger Tilters with loaders, 3½, 5, 7, 10, 14 Ft. Sizes. Non-Tilters up to 28 Ft. Trailers, \$169 up.



MAIL THIS SLIP!

THE JAEGER MACHINE CO.
521 Dublin Ave., Columbus, Ohio

Date _____

Please send catalog, prices and terms on

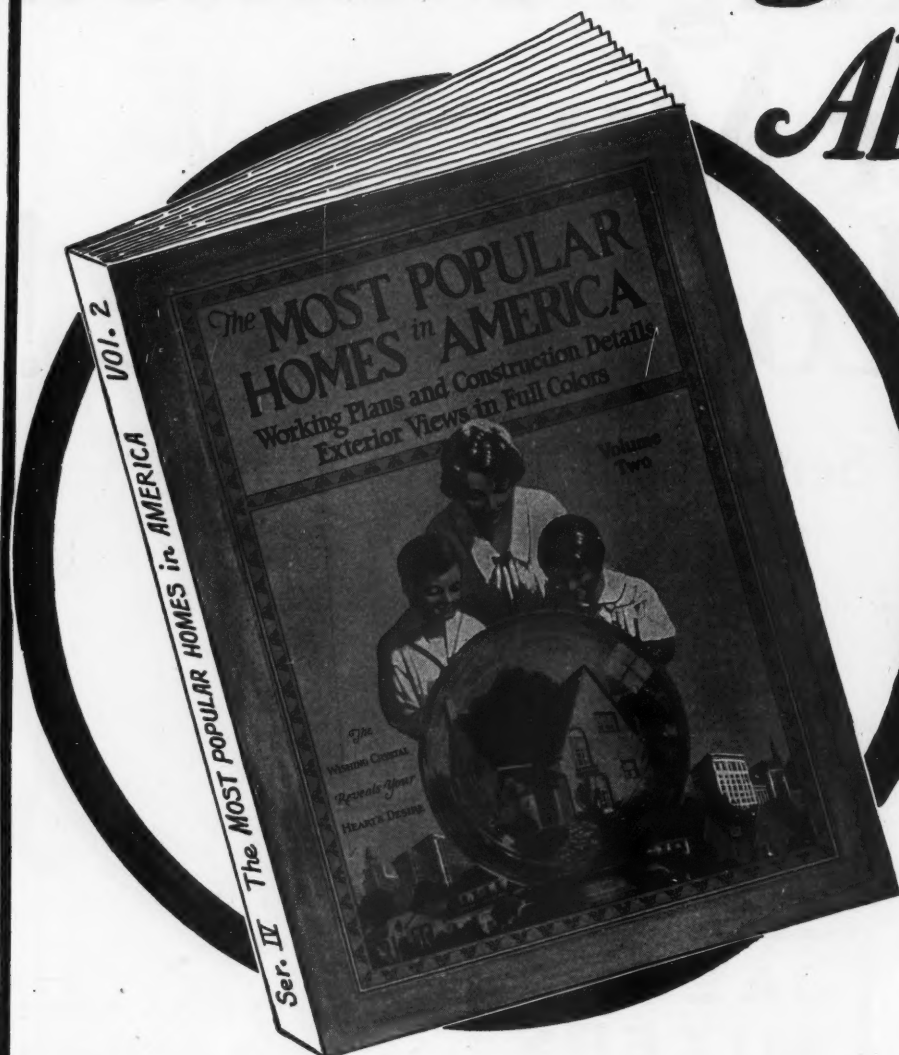
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The new book, "*Volume Two*", is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

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FIFTEEN of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

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FOLEY AUTO MATIC FILER Files All Kinds of Saws

You can file all kinds of hand saws on the Foley, band saws $\frac{1}{8}$ " to $4\frac{1}{2}$ " wide and cross-cut circular saws 3" to 24" diameter. Uses standard 3-cornered taper files. No eye strain. More than twice as fast as hand-filing. Easy work. Saws are filed with mechanical accuracy that beats even the most expert hand-filing. The Foley quickly earns its keep for any contractor or builder because saws cut so fast, smooth and true, and stay sharp longer.

Easy and Simple to Operate

Anyone can, with a little practice, turn out a perfect job on the Foley, by following the simple instructions. Nothing complicated—boys of 14 are doing first class work. Teeth are **AUTOMATICALLY** brought to even size, height and spacing—A Foley filed saw will give you a new idea of what a sharp saw is!

See the Foley Saw Filer exhibit Chicago Power Show, Coliseum Building, February 11th to 16th.

Foley Saw Tool Co., Inc.
137 Foley Bldg., 11 Main St., N. E.
Minneapolis, Minnesota

It's easy with the Foley Automatic Saw Filer and the **FREE PLAN** which we furnish you. Have a steady, year 'round income. Be independent. Have the things you can't afford now. Make \$10, \$15 or \$20 a week **EXTRA MONEY** spare time while you are getting started. These men, and many others, have done it—read what they say:—

"Business is good with the Foley Filer. My shop is not more than a shed 8'x19' near my house. I file for the entire school system in Peoria, the Bell Telephone Co., City Water Works, Preferred Oil Burner Co., Carpenters' Union, lumber yards and many others. From Aug. 4 to 28 I filed 300 saws for the schools. I also did other work during that time. My largest day's work was 32 saws. I get new customers every week."
M. S. GRAY,
Peoria, Ill.

"My Foley Filer sure does good work. I have filed about 200 saws and everyone is satisfied."
WALTER K. SMITH,
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"I bought a Foley Filer six or eight months ago, and it sure is a wonderful thing. I have more than paid for it in my spare time. It files saws so perfectly that men always come back, and bring other customers with them. They tell everybody about it, so you get trade easily and quickly."

MAX J. HARVEY,
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"I have all the saw filing I can do in my spare time, and then some. I have been hiring a man to take my place one day a week, and then can hardly keep up."

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We Help You Get Started

Our **FREE PLAN** shows you how to build up a cash business from carpenters, contractors, schools, factories, woodworking shops, farmers, etc. No house-to-house canvassing. And you can keep your own saws in perfect cutting condition, too. Let us show you.

SPECIAL OFFER!

Mail the coupon for special demonstration offer to readers of this magazine, and the **FREE PLAN** that will help you build up a fine spare-time or full-time business of your own.

Send in this Coupon

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Please send me the **FREE PLAN** that shows how easily I can build up a good paying business of my own with the Foley Filer. Also special demonstration offer so that I can see for myself how perfectly saws cut when they are Foley Filed.

Name.....

Street.....

City.....State.....

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WHEREVER COPPER, BRASS AND BRONZE ARE NEEDED

It is a false economy to use anything but copper, brass and bronze wherever a *durable, non-corrosive metal* is needed.

Chase products in copper, brass and bronze represent the finest that the industry affords. Chase Roll Copper for Flashings, Copper Gutters and Downspouts . . . Chase Bronze and Copper Screen Cloths . . . and the famous "Alpha" Brass Pipe made from a special kind of Chase Brass . . . these products will fulfill their appointed functions year after year, decade after decade—will give constant, satisfying service so long as the building itself stands.

You will find the distinctive Chase-mark, and the name Chase, on genuine Chase products. It is your guarantee of quality.



*The Mark that Identifies Good
Brass and Copper Products.*



*The Mark that Identifies Good
Brass and Copper Products.*



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Brass and Copper Products.*

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It's a swiftly changing age

Pick an "ace" if you seek Profit in the Building Field today

Nothing stands still in business today. Time-worn practices are sliding deeper into the ruts. That which is keyed to modern needs and conditions soars to heights of astonishing success.

The building field is no exception. Competition is keener. The public is asking more for its money. Will you meet that demand by cutting profits or will you seek a better way out . . . by fitting yourself into the trend of the times?

"Better, more permanent construction for less." How is it done? Do you know that you can lay masonry walls of Duntile and save \$1,000 in labor on the ordinary building? That you can build a double garage with Duntile at actually less than frame? That in certain localities whole blocks of buildings are of Duntile construction? That a man started making Duntile three years ago in Kansas City and has multiplied his investment thirty-three times? That one Duntile manufacturer reports his Duntile product last year displaced over a half million dollars worth of other types of construction? That Duntile manufacturing plants used 785,992 barrels of cement—an increase of over 30% over 1927—yet the possibilities have only been scratched.

You can prove all these facts and more to your own satisfaction. And you can make them mean profit to you. More sources of supply for Duntile are needed everywhere. Act at once and arrange to manufacture Duntile for your locality in a plant of your own. An exclusive franchise guards you from competition—protects your business, your investment and your future. But this swift age waits for no one. Act now if you want to cash in on this modern trend in building. The coupon will bring you the facts. Use it now.

W. E. DUNN MFG. CO., 415 W. 23rd St., Holland, Mich.



Swift and Sure a \$1,750 Start Grew to a \$100,000 Business

Five years ago in Altoona, Pa., two brothers sensed a change coming in building, saw the possibilities in a masonry material of lower cost. They started small but grew fast. Last year they refused over \$100,000 for their business. They say that the trend responsible for their growth is just really getting started. This is one example—many others prove Duntile the great business opportunity of the day. Let us lay the facts before you.



This Book tells How and Why

W. E. DUNN MFG. CO.,
415 W. 23rd St.,
Holland, Mich.

1-29

Show me, through your new book, "Basic Facts," how and why Duntile meets the new demand in building for better construction at less cost. Also show me how I can cash in on this new trend in building with a Duntile manufacturing business of my own.

Name _____
Address _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

simple as ABC

The (A)rchitect wants strength. The (B)ricklayer wants a smooth, easy-working mortar. The (C)ontractor wants to save time, labor and money. One part BRIXMENT, three parts sand will satisfy all three! Costs less to buy, less to mix, less to use. No lime. No slaking. No portland.

Ask for your copies of the new handbooks, "BRIXMENT for Perfect Mortar" and "BRIXMENT for Stucco".

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BRIXMENT

for Masonry and Stucco

• AROUND THE FAMILY TABLE •

"To Make Properties More Salable" is American Builder's BIG IDEA FOR 1929

Popular Specialties for Homes and Apartments Make Them
Sell Quickly and at a Profit

MERCHANT-BUILDERS and Contractors, building in quantities for sale, will be guided, instructed and stimulated ALL THROUGH THE YEAR by AMERICAN BUILDER's new Specialty Features covering every NEW, as well as every SEASONED, idea in Construction Materials, Building Equipment and Building Accessories.

In submitting this plan to our readers we invite your constructive criticism and co-operation. We want these Specialty features and articles to be complete, authoritative and of constructive sales value. Please report back to the Editorial Department every suggestion you can offer, together with full information pertaining to any and every specialty which you think should be included in this presentation.

Remember that this January SPECIALTIES NUMBER is not a "special issue," but is the big opening gun of a consistent editorial campaign which, if our readers find interesting and helpful, will run all through the year. We want the active interest and assistance of every one to make this feature complete and of compelling interest to the merchant-builders and the contractors who are planning and building in quantities for sale.

Do Banks Ignore Quality When Considering Home Financing?

The following portions of a letter from a prominent Ohio building company offer much food for thought—and perhaps action:

"I read your article (by Lewis Brandt) in the December issue of the AMERICAN BUILDER on Home Finance, and I was peculiarly impressed with it, because it is something that we have, for years, endeavored to work out, and have so far been unsuccessful.

"We own a group of lots in ———, on which we are building an English type home, 24x20, on foundation. In the living room we use an art concrete mantle, and furnish a radiant heater in the fireplace, and in one wall we provide a 7-tube, all-electric radio set, complete with tubes and speaker. In the kitchen, we lay inlaid linoleum on felt, on an oak floor, and build in an ironing board; in addition to the usual china cabinet, and a 30-inch sink, with mixing faucet. In the basement we provide a hot air furnace, of standard make, a 30-gallon water boiler and heater, 2-part laundry trays, and a 2-burner hot plate.

"On the upper floor are two bedrooms. One of them 11 feet 3 inches by 15 feet 6 inches, and the other 11 feet 3 inches by 10 feet. Each having a clothes closet of a good size (living room has a guest closet). Then we furnish a good size linen closet. The bath room has a 5½-foot full apron recessed tub, with shower and curtain, a pedestal lavatory and closet. The floor is hexagon tile, and the walls, 4 feet from the floor and 4 feet above the tub, are

of tile. All tile being vitreous. We also tile-in 2 trowel bars, a soap and grab, 2 soap dishes, and a tooth brush and glass holder, above the lavatory, and a toilet paper holder, and we build into the bathroom an electric heater.

"We sell this home for \$4,995.00 complete, with the lot, including sewer, water and gas in and paid for, with a down payment of \$495.00 and the balance at the rate of \$45.00 per month for 144 months, at which time the home is fully paid for.

"We are able to do this because we know construction (and I ask you to take my word, which I will prove any time you are in ———, that these homes are well built).

"We have completed in ——— about 20 homes under this plan, and now find ourselves confronted with two problems: First, our financing of the first mortgages has cost us more money than they should, in proportion to the cost of the houses, and if we could find first mortgage financing, for construction purposes, without bonus, it will enable us to put a great many more things into these homes, than we are able to do at present—such as steam heat instead of hot air heat; and second, we have exhausted all of the 12-year financing that we have been able to find for this particular locality.

"In selling these homes at the price we do we take a comparatively small margin of profit, when compared with the ordinary builder's profit, and in that way sell the home for at least \$1,000.00 less than the ordinary builders do.

"Our first mortgage is \$3,750.00, which is 75 per cent of our selling price, but would only be about 62 per cent of the average builder's selling price. Lending institutions, with whom we have come in contact seem to be able to see only the selling price. They fail to appreciate the fact that because we are selling the same house for about 20 per cent less, their mortgage is a better risk, because the buyer realizes then that he has received good value, and if the terms are well within his means, he will hang on to his home. They seem only to be able to see the proportion between the selling price and the mortgage.

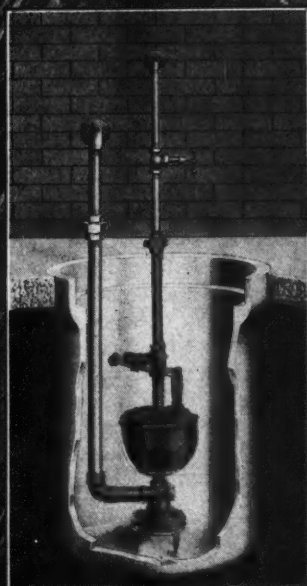
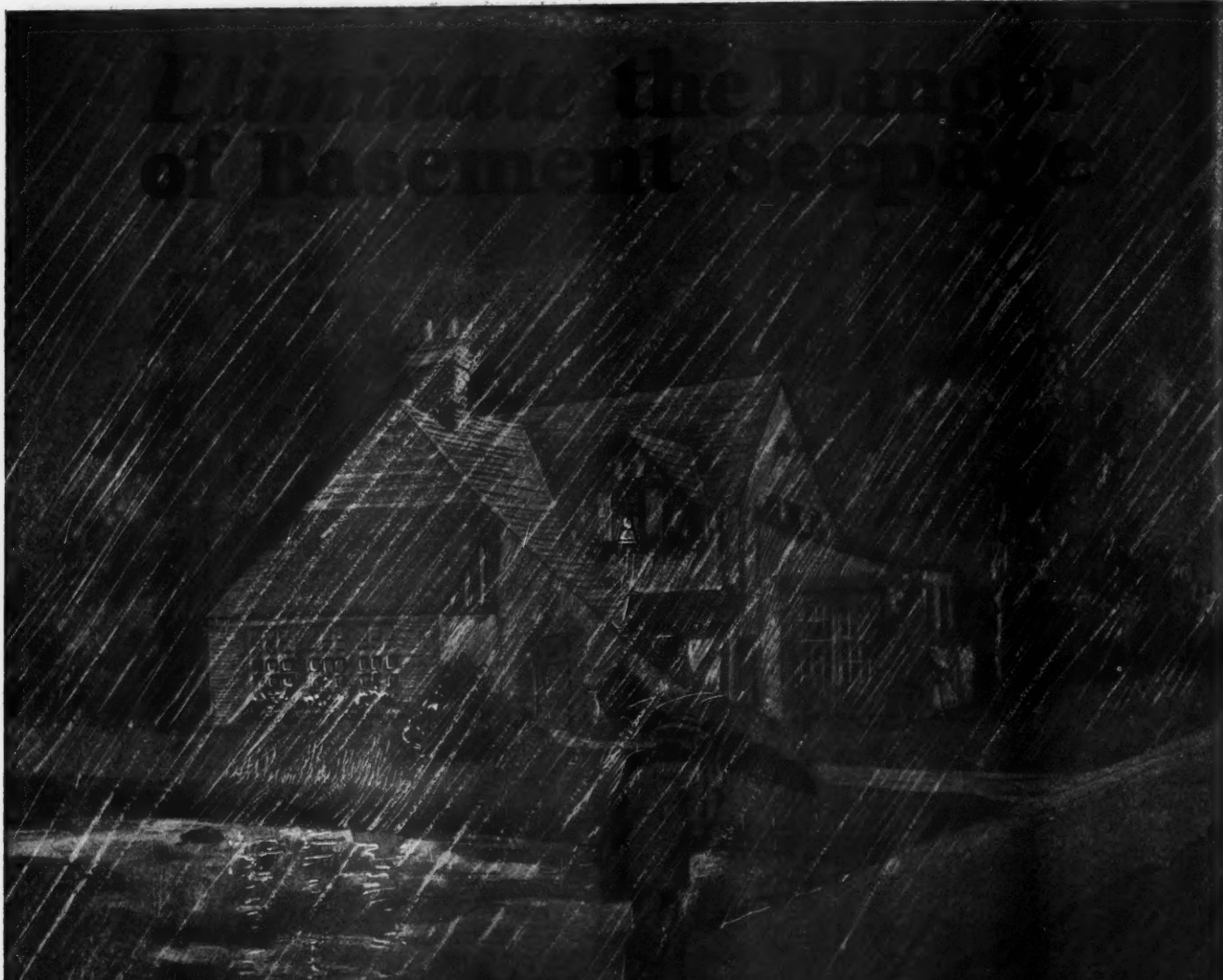
"We, ourselves, in every instance carry the second mortgage until paid, on a basis of 1 per cent per month, which includes interest.

"I hope that I have not given you the impression that we are just a charitable institution. We are doing these things because we think it good business, in other words, we feel that if we can build 3 or 4 hundred homes a year, and make a profit of, roughly, \$300.00 on each home, we will be in better shape than if we built one-third that number and made a thousand dollars profit on each, and we have, at the same time, enabled the average man who earns from \$35.00 to \$50.00 a week to own his home."

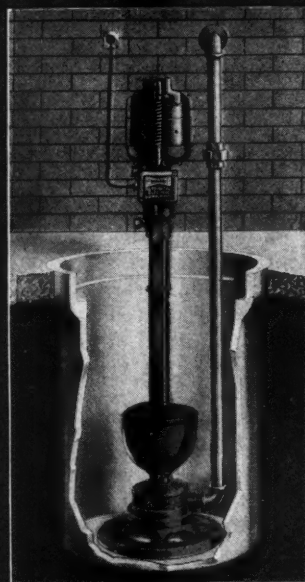
What do our other readers, who are building in quantities for sale, think of these questions? Let us hear from you.

BERNARD L. JOHNSON,
Editor AMERICAN BUILDER.

Eliminate the Danger of Basement Seepage



Install
Penberthy
Automatic
Cellar Drainer
or Electric
Sump Pump



COPPER AND BRASS PUMPS AND ACCESSORIES
PENBERTHY MANUFACTURING COMPANY
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Formerly AMERICAN CARPENTER AND BUILDER

105 West Adams St., Chicago—30 Church St., New York City

1928 Building Ahead of 1927

NEW construction started in the 37 states east of the Rocky Mountains during the first 11 months of this year, amounting to \$6,195,529,800, shows an increase of six per cent over the amount started during the corresponding period of last year, according to F. W. Dodge Corporation. The territory covered in the 37 states represents about 91 per cent of the country's total construction. Of the eight districts into which these 37 states are divided, three have shown increases over their totals for the entire year 1927. These districts are: the New England States, the Middle Atlantic States and the Central West.

During the past month there were \$471,482,200 worth of contracts let on new building and engineering work in this area. The above figure shows a gain of one per cent over the total for November of last year, but there was a loss of 21 per cent from the October, 1928, total. Last month's contract total included the following important classes of work: \$200,225,700, or 42 per cent of all construction, for residential buildings; \$93,227,600, or 20 per cent, for public works and utilities; \$68,309,100, or 14 per cent, for commercial buildings; and \$38,664,900, or eight per cent, for industrial projects.

New contemplated projects, as reported last month, reached a total of \$931,113,800. This figure represents increases of 51 per cent over the amount reported in the preceding month and 13 per cent over the amount reported in November of last year.



Army Tests End-Matched Flooring

A SAVING of 30 per cent in the cost of wooden flooring, through the use of end-matched lumber, was reported recently by the Quartermaster Corps of the War Department, to the National Committee on Wood Utilization of the Department of Commerce, according to Axel H. Oxholm, the committee's director.

The Quartermaster Corps, in co-operation with the National Committee on Wood Utilization, arranged for a test at the military post, Fort Myer, Va., installing end-matched southern pine flooring in the soldiers' social hall, the kitchen and in various other places where the material is subjected to considerable wear. The lumber was furnished by John L. Kaul, past president of the National Lumber Manufacturers' Association and a member of the National Committee on Wood Utilization.



To Establish Subdivision Bureau

A Consultation Bureau for subdivision projects is to be established by the National Association of Real Estate Boards through its Home Builders and Subdividers Division. This bureau is to be a machinery through which a subdivider, at the time he is planning a subdivision project, may get the advice of a group of the ablest men in his own business to pass upon the details of a subdivision project, in its formative stage.

In examining the project in detail, the group appointed by the Association's Home Builders and Subdividers Division membership will have the advice of competent consultants on problems of city planning, engineering and law. It will give the developer whatever suggestions its finds advisable for the better planning or plotting of the subdivision, for better financial set-up, for better sales plan or any other suggestion that experience indicates would better the project as a sound piece of modern city building.

If the Bureau finds the project, as examined, meets in every way the standards set up by the Division, it will be authorized to certify the fact to the public. The setting up of such a consultation service is expected to preclude, eventually, the putting on the market of ill-advised projects, according to Axel Lonnquist, chairman of the division.

Details of the plan for the new service will be brought before the Home Builders and Subdividers Division meeting to be held in connection with the annual business meeting of the Association in Birmingham, Ala., January 23 to 25, 1929.



Local Yards Will Handle Treated Lumber

ACCORDING to a recent announcement from the National Committee on Wood Utilization of the Department of Commerce, the Committee has taken up the question of wood preservation because it realizes that by chemical treatment most species of wood can be protected against decay and insect attack, which are two of the most deadly enemies of wood. For some time the Committee has carried on experiments as to the placing of treated lumber in retail yards, for sale to small consumers. Heretofore, the benefits accruing from the use of such lumber have been employed by wholesale purchasers of large quantities, such as railroads and large industrial consumers. Now, in view of the favorable results of these experiments, the committee will extend its work so as to make it possible for small consumers to purchase treated wood from local yards.



Our Front Cover

NOT that it *needs explaining!*—but here's the thought that the editor had in view as he described this month's conception to the artist: A picture in the modern manner of the mind of a builder after he has leafed through a copy of this publication!

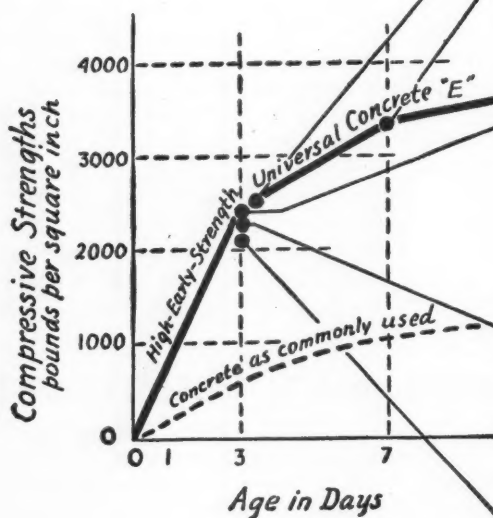
We think the artist has shown the idea well. Certainly about the most important and everpresent factor in today's home and apartment building is the selection of specialties, equipment and appointments that make for comfort, convenience, completeness and style.

These matters demand study. Through interest and study this front cover maze resolves into an orderly array, each item understood and ready to serve the builder of today in his big job of making homes and other building more salable and satisfactory. Study the AMERICAN BUILDER for the key to success in modern building.

Judge for Yourself

Actual Results on the Job
Check Tests in the Laboratory

- Curve based on laboratory tests
- Results obtained on the job



Heavy-Duty Foundry Floor
Du Bois, Pa.

2494 lb. concrete in 3½ days
Average of 3 test cylinders
Alfred Johnson, Du Bois, Pa.,
contractor

Manholes for Conduit
Chicago (Commonwealth Edison Co.)

3303 lb. concrete in 7 days
Average of 4 test cylinders
Bates and Rogers Construction Co.,
Chicago-Cleveland

Pavement
Lesure Street, Duluth

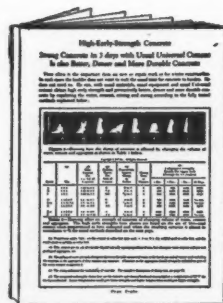
2350 lb. concrete in 3 days
Average of 6 test cylinders
John Wilson, City Engineer,
Duluth

Bridge Approach
Wausau, Wis.

2318 lb. concrete in 3 days
Average of 4 test
cylinders

Roof Slab (A Winter Job)
Morgantown, W. Va.

2115 lb. concrete in 3 days
Average of 2 test cylinders
Consolidated Construction
Co., Morgantown, W. Va.



Send the coupon
for your copy

—High-Early-Strengths Shown in These Tables
Are the Strengths You Can Get on the Job

Concrete as commonly mixed and placed reaches a compressive strength of about 2000 pounds per square inch in 28 days. The above examples show what you can accomplish with the usual grade of Universal cement in a fraction of this time.

Universal Portland Cement Co.

SUBSIDIARY OF U. S. STEEL CORPORATION

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

One Standard Cement for All Concretes and Mortars

Name _____

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Universal Portland Cement Co.
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Without obligation, please send me
your new booklet giving full details
for securing strong concrete in 3 days with
the usual materials
and labor.

AB 1-29

EVERYBODY'S BUSINESS



Post Mortems

By FLOYD W. PARSONS

NEW forces are at work on every side. This was clearly proved by the recent political campaign. Never before was any election so hotly contested, and this intense rivalry was not an outcome merely of issues, but of the new methods employed to set forth the facts to the masses. Doubtless the results will bring about a change in the viewpoints, methods and machinery of our political parties.

A few years ago a speaker's audience was limited to the range of his voice. Now with the aid of such devices as the microphone and loud speaker, one can talk not only to tens of thousands of people immediately before him, but his words carried over wires to broadcasting stations, many reach millions of ears in many lands. The linking up of radio and wires has accomplished what neither could do alone. Instead of being competitive, as many predicted, the two agencies have become allies. Likely in 1932 the radio audience at home will see the speakers as well as hear them. The recent debut of the "talkies" in politics disclosed possibilities unlimited.

Organized research in the communications industry has altered the habits of man. It has given him almost complete control of time and space and the interchange of ideas. It has rendered possible the distribution of an industry over the length of our land without destroying the efficiency of centralized management. It has given us apparatus to transmit pictures by wire and radio, devices to reduce deafness, the orthophonic victrola, the dial telephone, multiplex telephony and television. Except for the prohibitive cost, every person in the world today—whether on land, sea or in the air—could be brought into instantaneous communication.

It is because of this same easy accessibility of thought and speech that the world is becoming one large neighborhood in which the benefits of co-operation are taking the place of the miseries that result from conflict. While we have not yet arrived at any millennium, it is daily becoming more evident that we are on the way to a world civilization largely independent of environment and far less intolerant of racial, religious and cultural differences. And we must not overlook that this progress in electrical communication has come from exercise of private initiative made possible by a political system of regulatory commissions which

protect the public's interest while affording freedom of action to our great corporations.

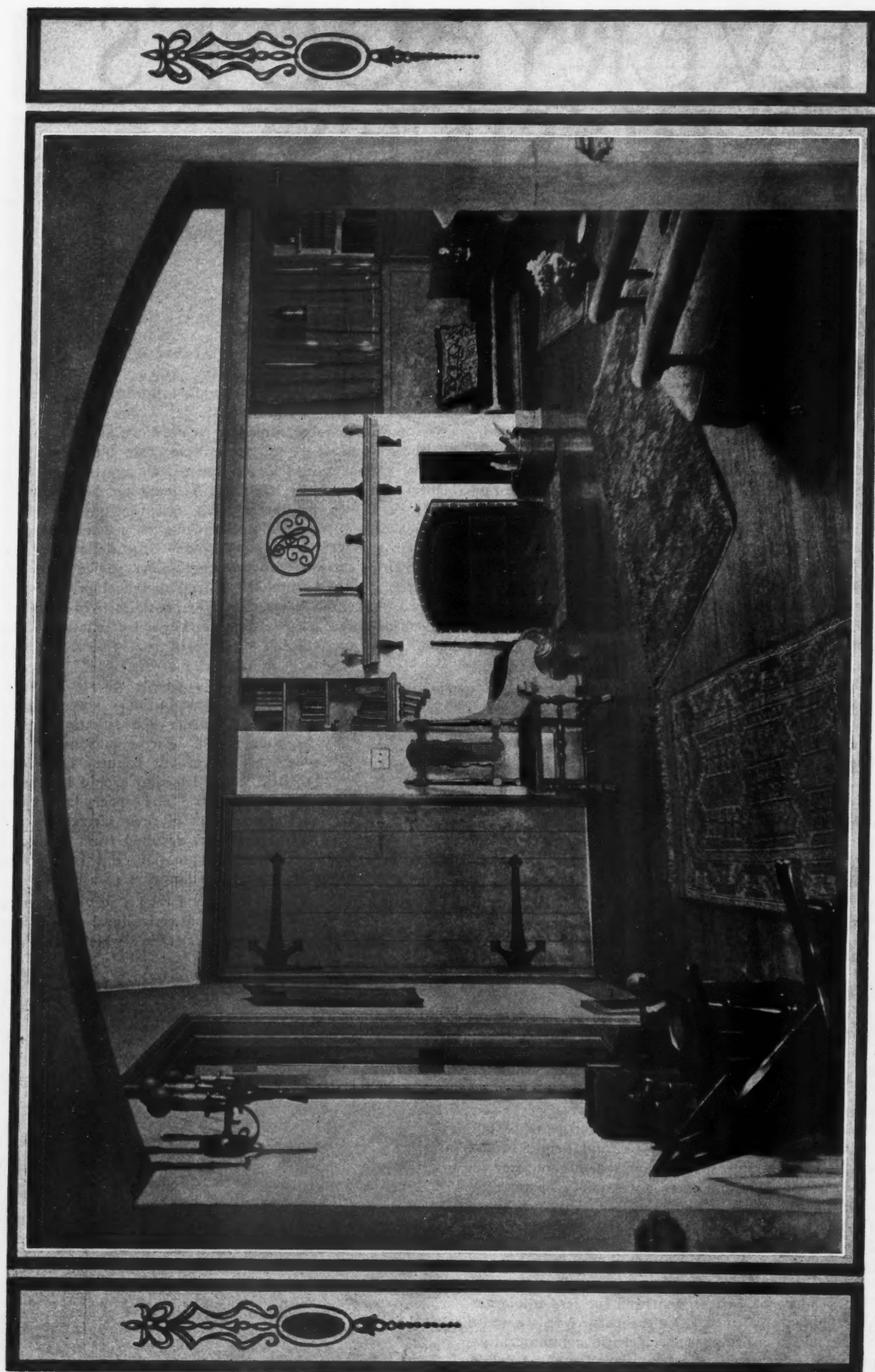
No matter in what direction we turn we are confronted by innovations that may concern our own business. The unwary will be ruined by unexpected changes. Thousands of things now sold by hand will be marketed by automatic machines. Two or three years ago the photographers did not dream that the slot-machine idea would develop for them a new form of competition. But along came the photomaton—an automatic photographing device—and immediately a highly complicated and technical process was reduced to machine operation. The possibilities of mechanical, self-operated salesmanship are beyond estimation. The use of "iron men" means lower costs from time saving and the elimination of errors.

Thousands of people go about complaining of slack business when opportunities to remedy the situation might easily be found. Farms in some of the older sections of our country now have so little value that they would hardly be accepted as gifts. The owners have clung to the viewpoint of their forefathers and their failure has resulted from a lack of vision and imagination, not of physical energy and a willingness to use it.

The other day I read a survey covering the business and agricultural possibilities of a northwestern state which has thou-



New World Methods and Old



The Colonial House Should Have a Colonial Interior, as Well Designed and as True to Style as Its Exterior, in Order to Achieve a Complete and Harmonious Beauty. The T. H. Maenner Co., Architects and Builders, of Omaha, Neb., have been notably successful in producing this effect in the living room pictured above.

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sands of acres of marshy land of little value for farming purposes. The investigators disclosed that the seemingly useless acreage is especially adapted for the propagation of muskrats. Not only are climatic conditions ideal, but there are water advantages seldom surpassed. How many farmers in this same state ever gave a thought to the opportunities that lies in the production of muskrat fur? How many of them ever devoted attention to the comparatively new industry of fox farming?

The average litter of silver black foxes is four pups to each pair annually. I know of one fox farm of 1,000 acres that started with 34 pairs of foxes eight years ago on land considered unfit for farming. The sales of the owner in 1927 totaled \$785,000. Present indications are that the output of skins this year will have a value in excess of \$1,000,000.

Why go on forever picking rocks out of unproductive soil when it is possible to build up profitable enterprises of this kind?

Never were there so many opportunities in business for one to satisfy the spirit of adventure. It costs quite a lot of money to buy a karakul coat, and yet the sheep which produces this fur can be grown in the United States. Rabbit raising also offers another avenue for the development of an interesting and substantial business. The growers of these prolific little animals are now finding it easy to sell the fur to manufacturers of felt hats as well as to the garment makers.

Dozens of other possibilities might be presented to refute the common notion that agriculture is barren of romance.

It was not long ago when an American chemist seeking to obtain thyroxin from the thyroid glands of sheep was impressed by the fact that those sheep having glands yielding large quantities of thyroxin were heavy wool growers; the others were scrawny and thin-haired. Physiologists were called in and supported the conclusion that an inactive thyroid gland serves to retard bodily and mental processes. This information was passed on to the sheep growers with the advice that they feed iodine to their flocks.

The result has been a material increase in the production of wool due to the increased activity of the thyroid glands.

Doubtless this accomplishment will direct more attention to iodine deficiency in humans residing in regions where there is a lack of the element in food and water. But of immediate importance is the benefit which has accrued to those alert growers of wool who were quick to turn this new disclosure of research to their own advantage. Deliberation of thought and action is not the virtue it once was. Today one must think on his feet.

Irrespective of the vigorous discussion concerning whether or not we are prosperous, the fact remains that the maintenance of success and the perpetuation of good times can only be achieved through eternal vigilance. In one branch of manufacturing, recent figures showed that 10 companies had a net turnover of \$14,000,000 a year with resulting profits amounting to only \$130,000. Volume was satisfactory, but a complete lack of co-operation had resulted in a merciless policy of destructive price competition, forcing these concerns to stagger along on a less than one per cent profit. Undersuch a condition, executives and wage earners may be enjoying prosperity,

but how about the stockholders who are financing operations?

We have entered an era when group action has become an essential to the success of business as signal lights are to the smooth flow of urban street traffic. There is no longer any excuse for the cut-throat methods employed in the competition of yesterday. The bad effect of an unprofitable price level is felt even by the consumers who enjoy a momentary benefit. Where there are no profits there can be no money available for research and for the betterment of plants and equipment.

Too many of our business leaders insist on "going it alone." They might stop and consider the importance of unifying the aims of competing managements. They might give thought to their stockholders, recognize their responsibility to the industry they serve, and clearly understand that they are partners and directors in it. They might find out if they are deluding themselves with inadequate accounting systems which actually do not show their true costs. There can be no direct fixing of prices or any division of markets that even indirectly serves to restrict production. But in the words of one eminent member of the United States Supreme Court, "The Sherman Law neither repeals economic laws nor prohibits the gathering and dissemination of information."

And while we are searching for ways to improve business, let us not lose sight of that oldest form of economy—waste elimination. What many consider the best managed corporation in America now saves an enormous amount of money by setting aside one week each year for an intensive campaign to reduce losses. Studies initiated by this plan succeeded in cutting the chains of precedent; added labor-saving equipment; reduced the number of needless and ineffective motions; standardized machine details and office forms; cut down the spoilage of materials; improved combustion practices; did away with excess inventories; stopped the extravagant use of light; and directed more attention to the reclamation of parts of obsolete machinery, tools and other equipment.

In every line of business there is a waste basket filled with hidden values. As one has said, "Little wastes in a great establishment constantly occurring may defeat the energies of a mighty capital." The wise boss is continually pointing out to his employes that leaks can be found by everyone who will exercise energy and concentration in looking for them. Waste elimination means something more than short pencils and economy in paper and ink. It is concerned with duplication of effort; with time lost in interviewing unimportant visitors; with energy expended on tasks that might have been delegated to others; and with systematic planning to eliminate peaks and valleys in the volume of office work.

Post mortems and weeding out processes, properly organized and conducted, will never fail to bring about material savings in any company. Many will be astonished to discover that their losses commence in the violation of a primary fundamental—laxity in the observance and intelligent use of office hours. We may be sure that the most important of all remedies for waste in business is the planning of one's work so as to get the most done in the least hours. Losses of materials are serious, but any considerable loss of time comes closest of all to being a disaster.



T. H. Maenner Co., Architects and Builders, 211 Broadway, New York

TRAINING

the Magic Formula for Success in the Building Industry

ONCE upon a time. That is the familiar opening of the fairy tales of childhood. And here is our old friend again, used once more as the beginning of as imaginative a yarn as you've ever read. What comes after is not fancy. It is fact. The rock bottom truth. But first the fairy tale.

Once upon a time, in a distant land by the sea, there was a beautiful Tower of Music. Erected as a tribute to the musicians' art in a land of musicians, the lofty spire was visible from the country side for miles around, a joy and an inspiration. But a blight fell upon the fair land; the musicians forgot their violins and their harps and their lyres and devoted themselves to more mundane affairs. One day the Tower of Music fell. There was a resounding crash and the beautiful Tower was only a mass of tangled debris.

There was mourning in the land of musicians. Mourning for the beautiful Tower of Music that was no more. Out of the universal sorrow there came a hope, and out of the hope a legend. Legend had it that the Tower could be resurrected by the playing of beautiful music; and all the old-time musicians dusted off their instruments and began tuning up.

One by one they made their way to where the magnificent Tower had once stood and played, as if in homage to the poor tangled mass of wreckage that was strewn about. They played as they had never played before, putting into it all the skill and all the hope they had. All to no avail. The Tower of Music was not resurrected; the debris did not untangle and unfold as legend had it that it would.

There came a holiday in the sad land by the sea, and one bent old musician said to himself: "This is a great holiday and all the musicians will be away in the fields, disporting themselves. I shall take my violin and go to the spot where the Tower was and play. Perhaps I shall be the honored one whose beautiful music brings back the tall spire."

Early in the morning he set out, the beloved violin strapped to his bent old back. On the way he met with an-

other violinist, his back, too, bearing his precious instrument.

"Where are you going, my friend, and what are you going to do?" asked the surprised first violinist of the second.

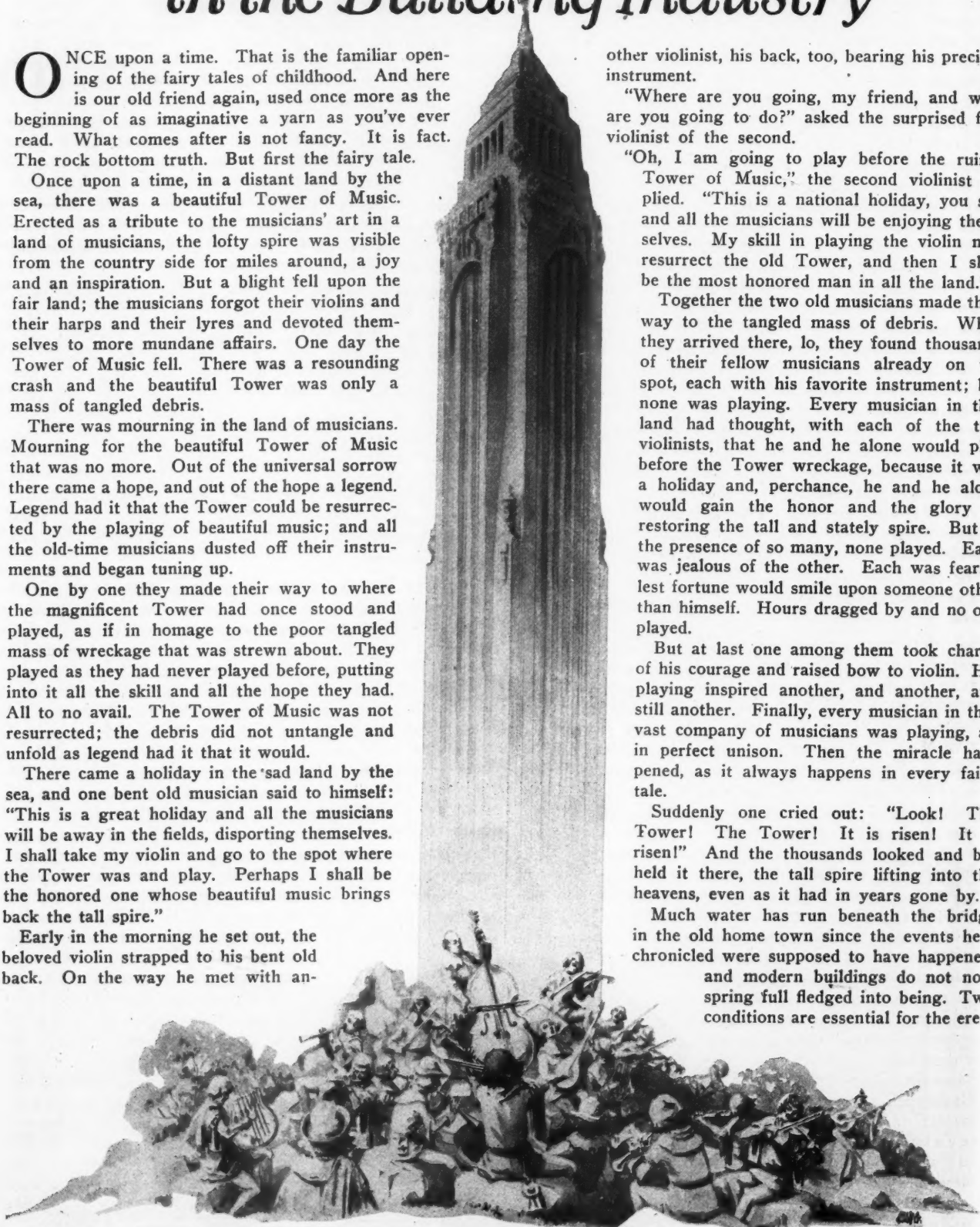
"Oh, I am going to play before the ruined Tower of Music," the second violinist replied. "This is a national holiday, you see, and all the musicians will be enjoying themselves. My skill in playing the violin may resurrect the old Tower, and then I shall be the most honored man in all the land."

Together the two old musicians made their way to the tangled mass of debris. When they arrived there, lo, they found thousands of their fellow musicians already on the spot, each with his favorite instrument; but none was playing. Every musician in that land had thought, with each of the two violinists, that he and he alone would play before the Tower wreckage, because it was a holiday and, perchance, he and he alone would gain the honor and the glory of restoring the tall and stately spire. But in the presence of so many, none played. Each was jealous of the other. Each was fearful lest fortune would smile upon someone other than himself. Hours dragged by and no one played.

But at last one among them took charge of his courage and raised bow to violin. His playing inspired another, and another, and still another. Finally, every musician in that vast company of musicians was playing, all in perfect unison. Then the miracle happened, as it always happens in every fairy tale.

Suddenly one cried out: "Look! The Tower! The Tower! It is risen! It is risen!" And the thousands looked and beheld it there, the tall spire lifting into the heavens, even as it had in years gone by.

Much water has run beneath the bridge in the old home town since the events here chronicled were supposed to have happened, and modern buildings do not now spring full fledged into being. Two conditions are essential for the erec-



tion of modern office buildings, apartment houses and homes: Individual training and concerted effort. The labor of many, each one thoroughly trained and all working together, makes our great cities, with their astounding skyscrapers and their thousands of beautiful homes. No playing, either at work or on a musical instrument, will turn the trick. More than in any other modern profession, the building trades require trained men. And for men trained in their tasks, the industry holds out success such as no fairy story can equal for fantasy. Training is the Aladdin of the building business that keeps the lamp of success shining for thousands.

Training being a necessary condition of success in the building trades, what will it profit a man to submit himself to instruction? A recent report of the Education Survey Committee of the Cleveland Foundation supplies the answer.

"The building business offers many opportunities for advancement to the man trained to shoulder responsibility," says the report. "There are a large number of supervisory and executive positions open to him."

Within a short time, a man can, for example, master plan reading and other fundamentals and become an assistant labor foreman. It is not necessary that he be the most skilled workman. He must simply be able to speak the blue-print language and carry out the foreman's orders. An assistant's pay is always better than the scale, and, besides, he is in line for promotion. He is sure of all-year-round employment, something the untrained man can not hope for.

The foreman, too, must be a technically trained man. He must know, among other things, how to handle men and get the maximum results from them. Positions as superintendent are within the reach of the trained builder. But basic knowledge is essential here. The superintendent must be able to build in full size the structure designed by the architect or engineer. This responsible position carries with it salaries as high as \$12,000 annually. Capable builders of homes who have mastered the technical and business side of building, pay income tax on profits running from \$5,000 up to \$25,000.

The tale of how the fabled Tower of Music was restored is pure imagination; but opportunities in the modern building field

are responsible for tales of success just as fantastic, but based on fact. The man who has had some practical experience in the building trades and then uses his spare time to master the technical side of the profession, has an unbeatable combination. Consider G. W. Moraw, of Chicago, as a case in point.

In Chicago building circles today the name



to a contracting business of his own.

of Moraw spells accomplishment. But it was not always so. Once this man, facing life with only a grammar school education, was a bricklayer's apprentice. But his eyes were upon the rungs of the ladder of success as much as they were on those of the wooden ladder he climbed with his bricks. In his humble capacity, he picked up enough knowledge about building to know his opportunity lay in reading and estimating. After several

to estimator—

years as a bricklayer's apprentice, he took a course in plan reading and estimating, studying in his spare hours.

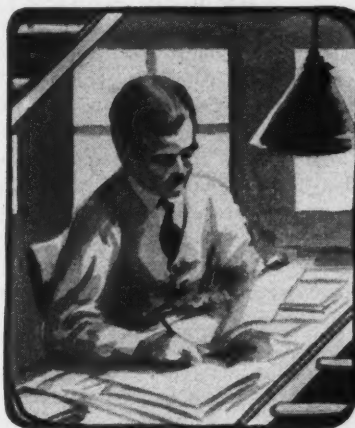
When he finished his course, Moraw secured work as assistant superintendent on a six-story structure and was well on the way to better things when the war came. He enlisted and was in an officers' training school when the conflict ended. His first job after leaving the service was as an estimator with one of Chicago's leading construction companies. After that the climb was rapid. Moraw soon started in the contracting business for himself. From a very modest beginning, his company has grown until today it occupies a foremost position in the Chicago building industry.

"Leaders are hard to find," Moraw says, in looking over the opportunities in his chosen calling. "That's why the trained man has unlimited opportunity to forge ahead, while the average man bemoans the fact that he is in the rut—yet does nothing to fight his way out of it. I firmly believe any man with just an ounce of brains can succeed if he has sufficient ambition to obtain the proper training."

The disappointments and sorrows of the untrained man in the building trades are more bitter and numerous than in many another calling, simply because training is essential to success. But, if the penalties of inadequate preparation are severe, the rewards of diligent application in mastering the job are correspondingly great. Consider, now, the case of John Hocke, architect.

It was twilight. Down the main thoroughfares of Chicago throngs were going home from office and factory. A young man walked slowly out of the office of a great construction company and, puzzled and dejected, moved along with the innumerable others. On the way he met a friend, Ed, a medical student.

(Continued to page 60)



to assistant superintendent—

The worker whose eyes are on the rungs of the ladder of success will recognize the fact that "the man who has had some practical experience in the building trades and then uses his spare time to master the technical side of the profession, has an unbeatable combination."



Climbing the ladder of success from bricklayers' apprentice—

HOME MODERNIZING



Remodeling Paid This Owner a 30 Per Cent Profit

By E. A. MARTINI, Architect

THE pictures opposite illustrate a modernization project whose ultimate aim differs slightly from the general trend. The average owner modernizes his home for the personal advantages he and his family gain, for more contentment and convenience in his home rather than for great financial returns. It has been demonstrated that the cost of reasonable modernization increases the value of the average building twice the cost of the alterations. In spite of this fact the majority of homes are remodeled less frequently for pure financial benefits than for the comfort and pride achieved in owning an attractive and up-to-date dwelling place.

No altruistic motive but purely a business one prompted the owner of this old house to spend several thousand dollars for alterations. The result of his experience should encourage others to follow his example. His profit was a financial one, as the figures prove, but the public's gain was even greater, as profits should not be figured in dollars and cents exclusively. A modernized home breathes an atmosphere of order and refinement which raises the standard of all buildings in its vicinity. This in turn increases land values. Other owners are prompted to improve their homes and the public is impressed with the surroundings as it realizes that efforts have been made toward improved conditions.

A common mistake in modernization consists in endeavoring to follow the latest fads and in demolishing too great a percentage of the old work simply because it appears old fashioned. In reality these antiquated details may be better than ultra modern ones which become obsolete quicker than older phases of building. Such methods have thwarted many an owner's plans and should be discouraged whenever possible. "Let well enough alone" is a good policy to follow. Otherwise it might happen that the old building plus the alterations cost almost as much as an entirely new one. For this reason, in all modernizing campaigns, owners are advised to preserve and utilize as much as possible of the original structure.

The owner of this house kept these facts in mind when he proceeded with the alterations. As the majority of the work was inside he chose a time of the year when weather conditions often stall outside work. The alterations were started in December and the building was ready for the new tenants before the following April. Working his force during the winter, the contractor could give his men all year round employment. Such methods help to retain good workmen who will perform better services if they are assured a steady income from their employers.

The pictures of the exterior show that the principal walls of the build-

ing were not changed, even the windows on the facade remain intact. Numerous appendages and small porches which defaced the old structure were removed and an entire new two story addition built on. To prevent this addition from appearing too high the roof was brought down and the second story built like a dormer. The main roofs were not altered and the changes were confined to the additions and dormers only. The wide roof overhang was removed and a moulded fascia board placed against the eaves instead. This change saved several feet of reshingling surface and improved the roof line at the right which would have looked awkward with a wide overhang so near the ground.

The three entrance doors indicate that the building now houses three families. Originally intended for a one family house, the structure, after it became old fashioned, was difficult to rent as its conveniences were inadequate for a family desiring many rooms. The building became an eyesore to the community and a burden to its owner until it was modernized. Naturally, numerous changes were necessary to rearrange the interior to house three families. Interior partitions were razed and others erected. All phases of building pertaining to the sanitary equipment of a home have shown marked improvements recently. This is especially true of plumbing installations and their fixtures, therefore the greater part of the plumbing was replaced with new.

The entire exterior was resurfaced with gray stained shingles laid over the old siding. This resurfacing eliminated patching the old siding and produces harmony between the old and the new work. The light color of the trim breaks any monotony and produces a cheerful appearance.

To prove that the work was financially profitable to the owner and to others as well, a few figures are given herewith:

The price of the original structure was \$7,000 and the cost of the alterations was \$6,000, making a total of \$13,000. The three apartments were rented before the building was completed and the revenue received from the rent amounted to 18 per cent return for the owner on the original investment of \$13,000.

Ten days after all the work was finished the owner sold the building for \$16,800, or a yield of \$3,800 on \$13,000, about 30 per cent.

The new buyer is now making a return from the rents of 13 per cent on his \$16,800 investment. A proof that the modernization was beneficial to the neighborhood also is the fact that within a radius of three blocks, three months after building operations were completed, six other remodeling jobs were contracted for.





This Modernization Project Converted an Old House, Which Had Been a Fine, Large Residence in Its Day, Into a Modern, Three Apartment Building Which the Owner Was Able to Sell within 10 Days at a 30 Per Cent Profit and Which Paid the New Owner an Excellent Return on His Investment.

A Little Money Plus Good Taste Add New Values to This Remodeled Home

THAT even a small amount of remodeling work, when combined with good taste, can work wonders in the appearance and desirability of a house is evidenced by the two photographs reproduced on this page. These photographs show the residence of C. P. Constantine, well-known Seattle, Wash., advertising man, before and after the application of Mr. Constantine's own ideas for the improvement of his home.

First the old, fussy front porch was torn away. A simple, unrailed porch of concrete and brick was built in its place and the old entrance was replaced by a handsome entrance in the best Colonial style. Next the wholly useless and unattractive dormer was removed from the roof. The belt, at the second story window line, was eliminated in covering the old narrow siding with shingles.

These shingles were laid with a wide exposure, in the most approved modern style and this accomplished at one stroke a complete transformation of



The Residence of C. P. Constantine, of Seattle, After Being Modernized in Accordance with Its Owner's Ideas, Shows the Results of Good Taste in Planning This Sort of Work.



The House Was Well Built but Finished in the Unattractive, Fussy Style of an Earlier Period When Less Taste Was Applied to Home Design.

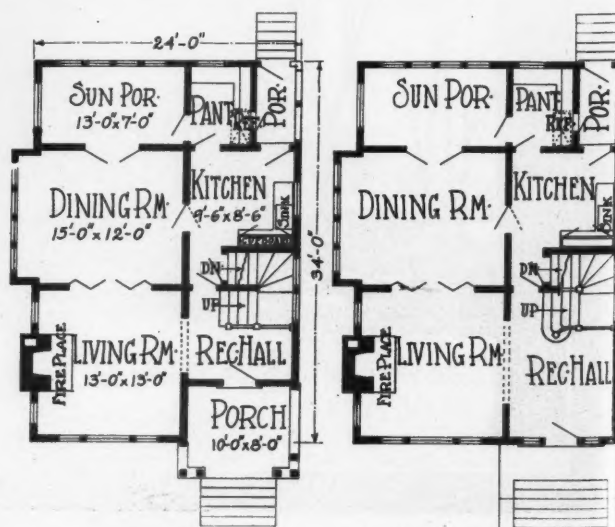
the appearance of the house. As a final touch, for the exterior, shutters were added to the upstairs windows, carrying out the Colonial tone introduced in the entrance.

Within the changes were even less elaborate and costly. In removing the old porch, the front wall was carried clear across, enlarging the reception hall to more comfortable and pleasing proportions. The arched opening between the reception hall and living room was widened and the stairway was remodeled, substituting a true Colonial stair for the older, less artistic style.

As is evident, the cost of this modernization was not great. It was justified many times over, both from the point of

view of the resale value of the house and from the satisfaction to its owner. The latter value, though one difficult to estimate in dollars and cents, is no less than that involved in resale value.

Then, too, there is still another value here. That is the effect of such an improvement on the neighborhood. When an old-fashioned but well built house is changed in appearance from the fussy style of an early period it adds to values all along the street and exerts an influence for improvement of the whole neighborhood.



The First Floor Plan Before Remodeling, Left, After Remodeling, Right. Enlarging the reception hall, remodeling the stair and widening the opening between hall and living room, worked wonders.



What does the Average Dwelling Cost?

Figures Collected by the United States Bureau of Labor Statistics,
Show the Cost Per Family of Dwellings Built in 89 Cities
During the First Half of 1928

DATA concerning building permits issued in cities of the United States having a population of 100,000 or over are collected semi-annually by the Bureau of Labor Statistics. For the first half of 1928 this information was collected from 89 cities.

A report on the average cost of the different kinds of dwellings, as brought out by these data, has recently been completed. The figures show the cost per family of the different classes of dwellings as stated by the prospective builder at the time of application for his permit to build and do not include the cost of the land. There may be a profit or loss between the cost to the builder and the price paid by the home purchaser. The figures should not be interpreted as showing the cost of a dwelling built on identical plans and specifications in each city, for in some cities much cheaper dwellings are built than in others.

Table 1 shows the number of families provided for in the first half of 1928 and the average cost of dwelling accommodations per family in the different kinds of dwellings in each of the 14 cities of the United States having a population of 500,000 or over.

Multi-family dwellings as shown in this table include a few multi-family dwellings combined with stores. It might be thought that the cost per family would be higher in the apartment buildings with stores included than in those without stores. As a matter of fact, taking the cities as a whole, the cost per family was less in the apartments with stores than in those without stores. Individual cities, however, might show different results.

In these 14 cities permits were issued for 30,323 one-family dwellings, the average cost of these dwellings, as stated in the permits, being \$5,169. The city of Washington built the most costly single dwellings, as \$8,534 per dwelling was spent in the capital city for the erection of this type of dwelling. In St. Louis permits were issued for 934 one-family dwellings and their average cost was only \$3,619. The average cost in Baltimore (some 40 miles from Washington) was \$4,001. In other words, the average single-family

dwelling for which permits were issued during the first half of 1928 cost over 100 per cent more in Washington than in St. Louis or Baltimore. Whether this means that Washingtonians are building 100 per cent better houses than St. Louisians or Baltimoreans, or are paying more for construction, could be determined only by an exhaustive comparison of plans and specifications in these cities.

There is also quite a contrast between the cost figures as shown for the two Pennsylvania cities listed, the average cost of the one-family dwellings for which permits were issued in Philadelphia being \$4,373, while in Pittsburgh it was \$6,190. The average cost of New York's one-family dwellings was \$5,782, while those of Chicago cost \$6,395.

The average cost per family for two-family dwellings was \$4,356, the range in the different cities being from \$2,279 in Buffalo to \$5,974 in Chicago. Only 14,312 families were housed in this class of dwelling in these 14 cities.

Permits were issued during the first six months of 1928 for multi-family dwellings to house 93,368 families, which is over three times as many families as provided for in one-family dwellings in these 14 cities. The average cost per family of the multi-family dwellings was \$4,214, the greatest cost per family being

found in the Borough of Manhattan, where it cost \$7,014 per family to house the 8,531 families domiciled in apartment houses. New York City as a whole housed 54,698 families in apartment houses during this period and the average cost per family was \$4,406. The average cost per family was \$2,063 in St. Louis and \$5,597 in Washington.

There were 138,003 families provided for in all classes of dwellings for which permits were issued in these 14 cities during the first half of 1928, the average cost per dwelling unit being \$4,438. The most expensive dwellings were built in the Borough of Manhattan where it cost \$7,019 per family. Considering each city as a whole, however, Washington paid more per family unit than any of the other cities. It cost \$6,610 per family to care for the 2,126 families provided for in Washington during the first half of 1928.

(Continued to page 65)

TABLE 1.—AVERAGE COST OF DWELLING ACCOMMODATIONS PER FAMILY IN CITIES HAVING A POPULATION OF 500,000 OR OVER, BY KIND OF DWELLINGS: PERMITS FOR FIRST 6 MONTHS OF 1928

City	Number of families provided for	Average cost per family	City	Number of families provided for	Average cost per family
One-family dwellings			Multi-family dwellings¹		
St. Louis	934	\$3,619	St. Louis	2,254	\$2,063
Los Angeles	3,557	3,947	Los Angeles	7,042	2,180
Baltimore	1,707	4,001	San Francisco	2,097	2,403
Philadelphia	4,733	4,373	Milwaukee	1,190	2,735
Borough of Richmond ¹	645	4,416	Pittsburgh	438	3,945
San Francisco	1,330	4,445	Buffalo	86	3,140
Buffalo	401	4,542	Detroit	2,996	3,344
Detroit	3,526	5,291	Boston	2,198	3,449
Borough of Queens ¹	5,328	5,455	Borough of Queens ¹	10,976	3,499
New York (all boroughs)	8,351	5,782	Borough of Richmond ¹	444	3,590
Boston	330	5,556	Borough of Brooklyn ¹	13,036	3,804
Cleveland	807	5,967	Cleveland	695	3,863
Milwaukee	535	6,064	Baltimore	276	4,112
Chicago	2,396	6,190	Borough of the Bronx ¹	21,709	4,218
Borough of Brooklyn ¹	1,632	6,805	New York (all boroughs)	54,698	4,406
Borough of the Bronx ¹	742	6,939	Chicago	16,105	5,167
Washington	745	8,534	Philadelphia	1,555	5,385
			Washington	1,369	5,597
			Borough of Manhattan	8,531	7,014
Total (14 cities)	30,323	5,169	Total (14 cities)	93,368	4,214
Two-family dwellings²			All classes of dwellings		
Buffalo	691	\$2,279	St. Louis	4,095	\$2,691
Washington	12	2,792	Los Angeles	11,730	2,823
St. Louis	897	3,309	Buffalo	1,389	3,091
Detroit	2,733	3,496	San Francisco	3,613	3,246
Los Angeles	1,624	3,591	Milwaukee	2,263	3,873
Milwaukee	538	4,184	Boston	3,052	3,909
San Francisco	196	4,195	Baltimore	1,963	4,016
Boston	1,164	4,213	Borough of Richmond ¹	1,247	4,106
Borough of Richmond ¹	153	4,296	Detroit	9,257	4,127
Borough of Queens ¹	1,712	4,447	Borough of Queens ¹	18,016	4,168
Pittsburgh	101	4,625	Borough of Brooklyn ¹	16,986	4,203
Cleveland	484	4,710	Borough of the Bronx ¹	25,227	4,346
New York (all boroughs)	4,973	5,010	New York (all boroughs)	58,022	4,619
Borough of Brooklyn ¹	2,318	5,302	Philadelphia	6,723	4,680
Borough of the Bronx ¹	785	5,440	Cleveland	1,566	4,524
Philadelphia	135	5,624	Chicago	19,885	5,371
Chicago	1,364	5,974	Pittsburgh	1,078	5,800
			Washington	2,126	6,610
			Borough of Manhattan	8,536	7,019
Total (14 cities)	14,312	4,356	Total (14 cities)	138,003	4,438

¹ A borough of "Greater New York."
² Includes 1-family and 2-family dwellings with stores, the number and cost of which are shown separately in the October Labor Review.
³ Includes multifamily dwellings with stores, the number and cost of which are shown separately in the October Labor Review.

SPECIALTIES *Invite*

A New Note In Home Building

Unusual Attention to All Details and Appointments Made to Pay

By **EDGAR C. HANFORD,**

Of Hanford & Spayth, Builders, Springfield, Ohio

LET me say at the beginning that, in building the "Music Box Cottage," we by no means exhausted the possibilities for installation of conveniences, improvements, specialties, and labor saving devices. However, we did make an effort to include such items as would be a direct benefit to the woman who might live in this home and who might at times have to do her own housework. That, perhaps, is not always easy to do. What would be a labor saving device in one house might, conceivably, be a time waster in another.

Placing oneself in the position of the future mistress of the house is perhaps the best way to determine what is necessary in the way of convenience installations and what would be superfluous.

That there is almost no limit to the conveniences that might be installed in even a moderately priced home is clearly evidenced by any issue of the *AMERICAN BUILDER*. Its advertising pages are replete with new ideas, new conveniences and improved methods of application; and the present day builder must of necessity give these consideration.

The day when four walls and a roof represented a home and could be sold as such has definitely passed. This fact is clearly evident in all sections of the country. Better built and far more complete homes are rapidly becoming the rule, even in the medium

price class and it is the wise builder who recognizes this tendency and gives serious consideration to the installation of those improvements and conveniences that increasingly are being demanded by educated and intelligent buyers.

Several factors, of course, contribute to this increasing buyer discrimination. Improved economic conditions, increased buying power due to greater wealth and the very general desire for more time in which to enjoy pleasures

which were not available to the preceding generation, have all contributed to this desire for more completely equipped homes.

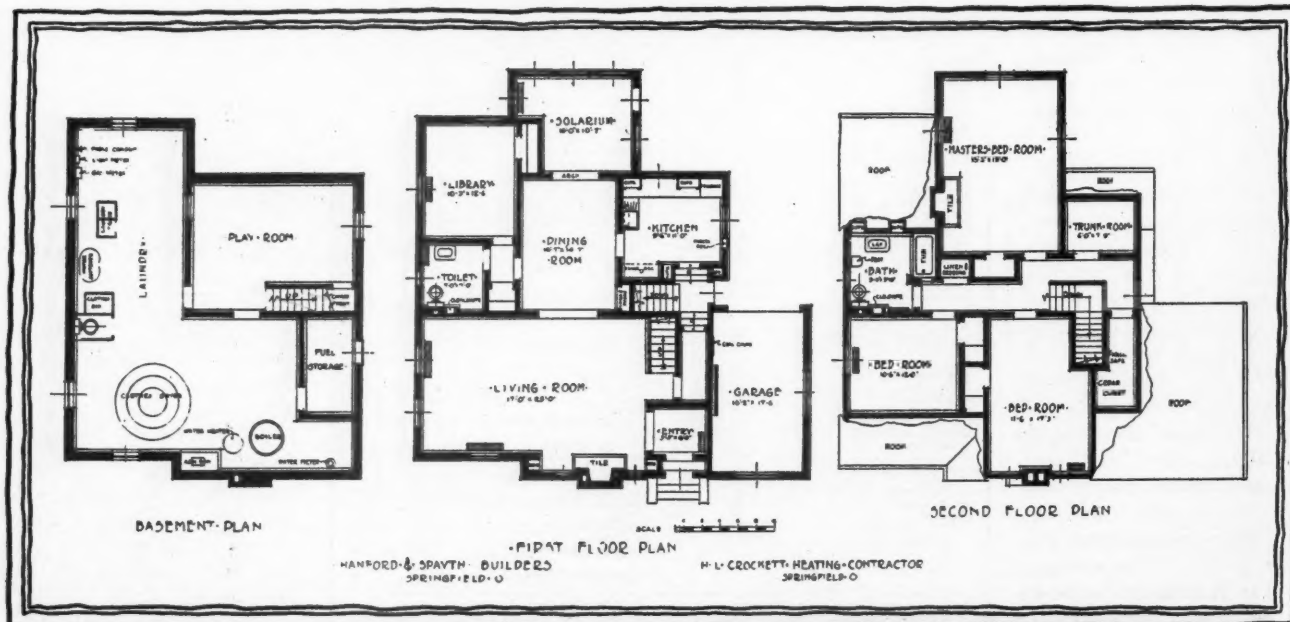
But, perhaps, the greatest contribution to this desire has been the vast amount of advertising which has, in recent years, filled the pages of class and trade magazines and overflowed into the magazines of general circulation. Magazines devoted to the interests of home and home ownership were almost unknown a decade ago, whereas today many of them rank at or near the top of the list, both in circulation and advertising.

Whether or not he wishes to do so, the present day builder must recognize this public tendency and give earnest consideration to equipment and conveniences that will make the public desire to purchase the homes he offers for sale. Otherwise, he soon will pass out of the picture.

But the situation as presented here need not be financially alarming to any



Edgar C. Hanford.



The Floor Plans of the "Music Box Cottage" Show the Many Exceptional Features of This Home.

Attention To the "Music Box Cottage"



builder. There are a dozen convenience devices on the market that can be included in any house for less than \$100 that will add several times their cost to the selling price—and produce a quicker and more satisfactory sale.

Consider bedroom closets. In my inspection of new homes over a period of years in many states, bedroom closets have been almost totally neglected, even in otherwise expensive homes.

And yet for less than \$10 any builder can install modern types of garment hangers, hat, necktie, umbrella and shoe hangers and build in ventilated lingerie drawers.

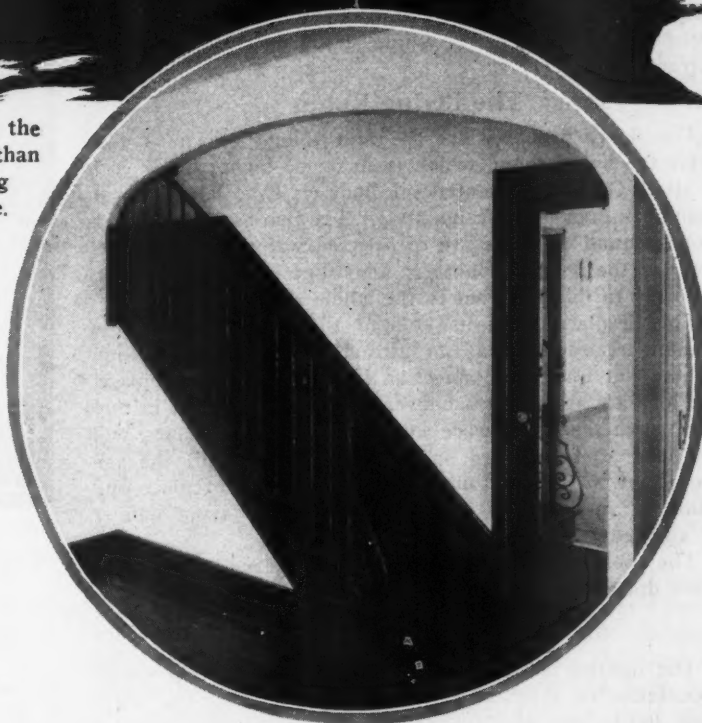
Most modern dressers or chiffoniers do not have adequate room for all these articles of wearing apparel and when such equipment is included in the closets, it acts as a silent salesman with every woman who sees it.

Other equipment of equal appeal and just as inexpensive can be gotten for other rooms in the house. It's all a matter of finding it—and that's what the advertising pages are for.

Let me take you on an inspection trip through the "Music Box Cottage" which we have built here in Springfield; and I will point out the various special features that make such homes sell before they are finished.

As you come up the walk, you undoubtedly notice the landscaping—one of the most elaborate plantings this year in Springfield. A variety of choice plants and shrubs are included and guaranteed by W. E. Hamilton, landscape architect, under whose personal direction the work was done.

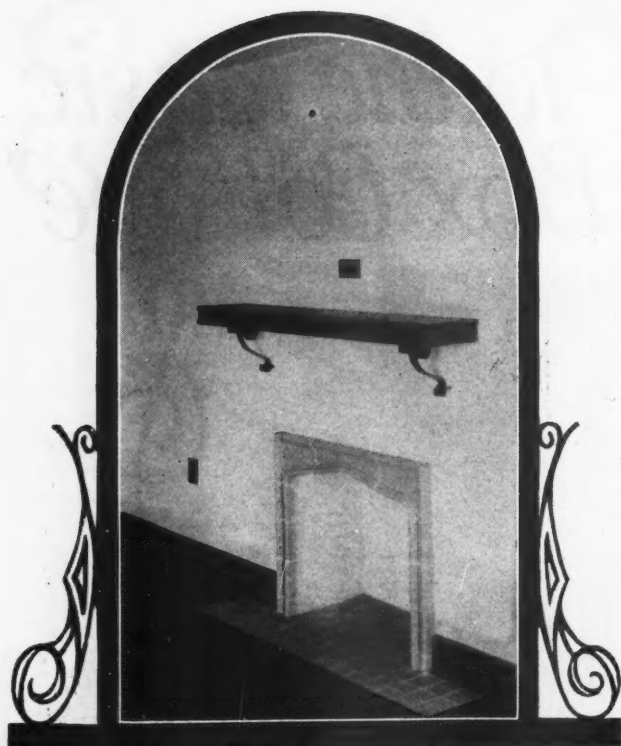
The insignia of the "Music Box Cottage" is marked in the walk and also adorns the chimney. The beautiful tree in front of the chimney is a rare pink-flowered dogwood.



A Close-Up of the Stairway, Showing the Effective Treatment of the Wrought Iron Railing. The attractive floor design at the foot of the stairs is achieved by alternate use of oak and walnut, laid log cabin style.

As you ascend the steps, the tiled entrance gives a pleasing effect, while to the right of the door, which has a leaded-glass window, is a combination mail box, house number and door bell, all in one unit—a dignified method of installing these fixtures.

In the entrance hall, which is 6 feet 3 inches by 5 feet, there is space for a small console table on which, no doubt,



Graceful Mantel and Fireplace in the Master's Bedroom, Second Floor, "Music Box Cottage."

you would wish to place a lamp, or candelabra. For this purpose there is provided a convenient double wall receptacle. The radiator is of ample size properly to heat the entrance hall.

The Living Room

The floors probably are the first thing noticed as you enter the living room, which is 25 feet 3 inches by 17 feet in size. Over a substantial sub-floor we have laid the best grade oak floor in log-cabin style. The two bands of darker wood around the edge are of selected walnut. This treatment of the floor undoubtedly adds dignity and stateliness, not only to the floor, but to the whole room.

The fireplace, with its colored tile hearth and simple mantel treatment, adds an attractive note to the room. Where but one gas connection is installed in a fireplace, the logs are apt to burn unevenly, so we have built in two gas connections to insure even burning. The ashes will not have to be cleaned out by hand—merely tilt the ash dump. A. G. Samuelson, Inc., who built the fireplace and chimney, installed an improved damper, to avoid danger of smoked walls.

The bookcases on either side of the fireplace have leaded-glass doors with drawers beneath.

Special Light Fixments

The lighting fixtures were selected by a lighting studio representative after inspection of the house. The eight wall lights and ten convenient wall receptacles provide ample light for the room. The wiring, which throughout the house is enclosed in B-X cable, was installed by Sam Wright, electrical contractor, according to the G. E. code of installation.

You will wish to examine the screens. These are of metal, screened with the best grade of 16-mesh copper wired. Please note that the channels and fittings also are of copper and that each screen is numbered with a corresponding number in the window sill.

The steel casement windows are absolutely airtight, having been embedded in plastic cement when installed. Double-strength grade A glass is used in all windows.

The Dining Room

Here is a unique feature that you probably will like. This is an inside room, thus giving that much-desired privacy which is so hard to get when the dining room is to the outside. However, ample light and ventilation are provided through the large openings at either end of the room, which is 14 feet 8 inches by 11 feet in size.

The living room opening has been cased for French doors should they be desired, although an attractive screen is, just now, the popular method of separating these rooms.

In the right-hand wall there is a built-in telephone cabinet with considerable storage space beneath. The tilting cupboard at the bottom is intended for magazine storage.

The Sun Parlor

Let's pass on to the sun parlor, which is 13 feet by 10 feet in size. Here again the floor attracts attention. It's a new idea in flooring and here you probably see the first installation in the city. It is cellized oak flooring and only recently placed on the market. The wood has been treated so it will never crack, shrink, warp or do any of the other disagreeable things hardwood floors sometimes do.

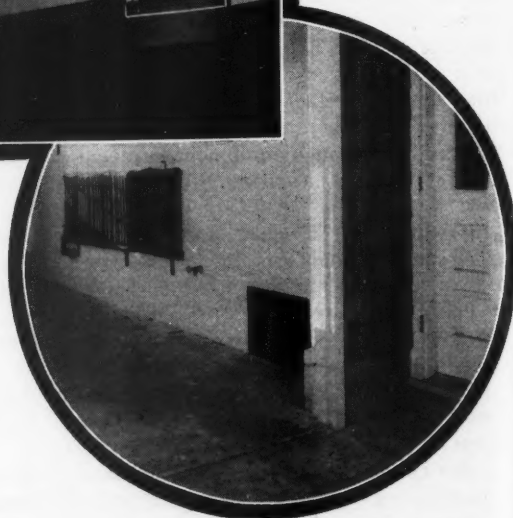
The Powder Room

Passing through the door in the dining room to the left you enter a small hall in which there is a commodious closet. Beyond is the powder room, 7 feet square.

Here the flooring is cork linoleum cemented to the sub-floor. The dignified china pedestal lavatory has an exclusive feature in the waste stop, which can be lifted out for cleaning.



To Left—A Corner of the Master's Bedroom, Showing the Handy Shoe, Necktie and Hat Racks of Wire, Which Are Part of the Closet Equipment.



The Garage. Note that the floor is raised an inch above the Driveway, so that, when the doors are shut, no wind or snow can sweep in under. This coal chute is placed in the garage so that, if coal should be delivered on a windy day, coal dust will not be blown around the yard or into the house. There is a water tap, a large radiator and a double service electrical outlet. The service door into the house is just a step away.

On the wall beside the toilet there is a brand-new idea. It's a combination ash tray, cigar and cigarette holder, match holder and newspaper holder. A mighty convenient fixture. There's another one in the bathroom upstairs.

This fixture, as well as all the towel bars, soap dishes, etc., throughout the house are easy-set fixtures. As you know, built-in fixtures, especially soap dishes, are hard to clean. However, all these fixtures can be removed for cleaning or replacement. This is a feature the housewife will appreciate.

"What a beautiful mirror," we said when we saw it recently at the factory. It's new, too! The best magazines will be showing it this winter.

The walls in this room, including the arched ceiling, have been sponged; that is, the paint has been applied with a sponge. We think you will like this room, especially for guests.

The Library

Just to the rear, through the small hall, is the library, 12 feet 6 inches by 10 feet 6 inches in size. Or, it can be used for a bedroom. This room is entirely shut off from the rest of the house by the two doors, thus insuring privacy and quiet. It's two-way ventilation and large closet add to its usefulness.

The Kitchen

Let us go back through the dining room to the kitchen. Here is a small room, only 11 feet 3 inches by 9 feet 8 inches in size, but so arranged as to use all space. Cork linoleum is cemented to the sub-floor. To the right as you enter is the offset for the stove. Look up underneath and you will see the vent for carrying off odors and smoke. To the left is the sink with a radiator underneath and a light directly above. Here again are fixtures for soap and tumbler, while the combination faucet is the most complete obtainable.

Near by in the wall is the signal light and switch for the electrically operated water softener.

Don't you like the table top? It's a special glass, impervious to heat, cold and acids and so easily kept clean! The shelving in the cupboards is adjustable for height or removable for cleaning. Certainly an improvement over the old-fashioned stationary shelves. The cupboard hardware is an improved design. Under the right-hand cupboard is the pantriette for dry groceries, such as flour, rice, beans, etc. Notice, please, that the base of the cupboard is set back to a height and depth of two inches to provide a toe hold when working at the table. Thus, the base of your cupboards will not become marred or scarred.

Next is the refrigerator (electric). It's one of the new type, noiseless and economical and of ample capacity for the average family.

Built in the outside wall is the milk and package receiver. A health feature that never should be omitted, because it keeps heat, cats and dogs from the milk and groceries.

On the wall above is an eight-day kitchen clock.

Conveniently located beside the stove is a cupboard for pots and pans with two drawers for cutlery.

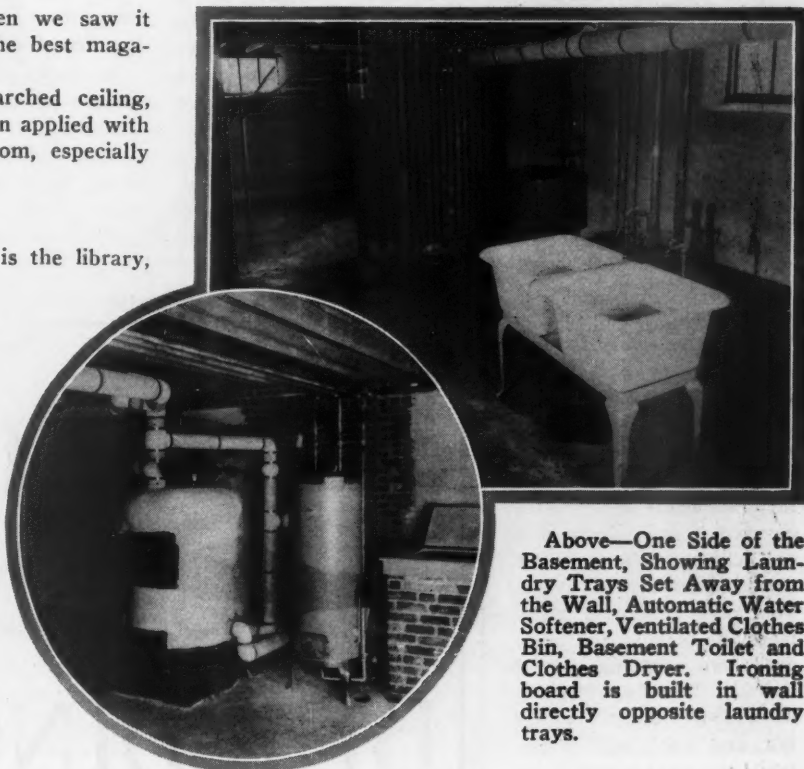
The Basement

Just outside the kitchen door is a broom closet and, two steps down, the grade door. Going on down the stairs, which are finished and painted, you come to the play room, 18 feet by 14 feet 6 inches in size. Here the children may be turned loose on rainy days or guests may be entertained at cards or billiards. The walls and ceiling being plastered,

only a rug on the floor is needed to make this an added living room. Under the stairs is the fruit room with shelving to accommodate several hundred jars of fruit.

Passing through the door to the right, you enter the furnace room. To the left is the dust-proof fuel room with the coal chute opening into the garage. The water meter is in the far corner in back of the fuel room.

The boiler is placed convenient to the chimney and includes all the latest improvements, such as a relief valve



Above—One Side of the Basement, Showing Laundry Trays Set Away from the Wall, Automatic Water Softener, Ventilated Clothes Bin, Basement Toilet and Clothes Dryer. Ironing board is built in wall directly opposite laundry trays.

In Circle—A Corner of the Basement. To the extreme left is the fuel room door, then the heating plant, water heater and ash bin with cleanout door at bottom.

to prevent explosions and thermostat for regulating the heat.

Circulating over the furnace you will note a long wire fastened to the joist. This is a fire-detecting system, which automatically rings an alarm bell in the upstairs hall should the furnace overheat. Rather comforting on a cold winter's night to know that you have an automatic fireman standing guard over your heating system!

To the right is the water heater. Good looking, isn't it? The side walls of the heater are lined with asbestocel, four inches thick. Note the relief valve on top and the thermostat on the side.

This thermostat is a clever little instrument regulating the flow of gas according to the amount of hot water being used—that is, if no hot water is being used, only the pilot light is burning and no gas is being wasted. However, as hot water is used, the thermostat automatically feeds gas to the burner, making it impossible to run the water cold. You are welcome to try it at any time.

H. L. Crockett, the plumbing contractor, has connected a return pipe from all hot-water faucets throughout the house, thus providing circulating hot water. This insures instant hot water at any hot-water faucet.

It's no fun carrying out ashes on a cold winter morning, so we have built a brick ash bin here in the corner offset. It has a sliding top and, down near the floor, a clean-out. If you're not too extravagant in the use of coal, this bin should hold all the ashes you will accumulate in a winter's firing of the furnace.

Just over here to the right we have installed a clothes

dryer between the two windows where it will get cross ventilation.

We like the idea of a steel girder and steel posts as they have been installed in this residence. Lumber, you know, usually dries out more quickly in the center of the house, than at the outside walls—therefore the ugly cracks so often seen around chimneys and inside corners in new houses. The steel girder goes a long way towards preventing these cracks.

Here to the left is the basement toilet, enclosed and ventilated. The clothes bin, as you see, is slatted on the sides and bottom and is large enough to accommodate two weeks' washing if necessary. Being ventilated, as it is, damp towels or clothing will not mildew as they would if the bin were not ventilated.

This is the electrically operated water softener—a husky, good-looking machine that will give years of automatic service. Just pour a hundred pounds of cheap salt into the brine tank four or five times a year—depending on the amount of soft water used—and the little electric motor inside will do the rest. If you've had to contend with the bother and annoyance of a hand-operated softener, you'll surely appreciate this one.

These beautiful laundry trays are made of porcelain covered iron, which will not chip, crack or scar under even severe usage. We have set them away from the wall so the laundress can work all around them. The springing nicked faucet is for hot and cold soft water, while the rigid faucet is for cold city water. Please note that this faucet has the end threaded for hose connection.

Here, alongside the fuse box, is a pipe through the foundation wall, through which the telephone wires may be run from the pole at the rear reservation. The electric light wires also come into the house underground from the pole, so there are no overhead wires to mar the exterior beauty of this home.

The wide, deep shelf back here under the window is an ideal place to store plants and flowers during the winter. It's useful, too, for lots of other storage purposes.

The ironing board is built in the wood partition dividing the laundry room from the play room, and right beside it is the service receptacle for the iron.

Now you're ready to inspect the second floor. As you come up the cellar stairs, you turn to the right through this door into the hall, 7 feet 10 inches by 2 feet 9 inches in size, which also serves as a guest closet. Cork linoleum is cemented to the sub-floor. Out into the living room through another door which has a full-length mirror in the living-room side.

The Bathroom

At the end of the hall is the bathroom, 9 feet 10 inches

by 9 feet in size. Here we were able to do some unusual things. Perhaps the first thing you will notice is the absence of a medicine cabinet and in its place another of those beautiful mirrors. With the large variety of cosmetics required nowadays, a medicine cabinet isn't of much use, anyway.

Instead, we have built in these two large closets with shelves above and drawers beneath. Plenty of room for towels as well as the toilet articles—and each member of the family may have a separate shelf or drawer for his or her personal use. If you wish, we'll even put locks on the drawers!

In the wall beside the wall heater is another unusual feature—a built-in seat. When folded in the wall, it's entirely out of the way and, when let down, it provides a comfortable seat. And the owner of this house will never have to worry about disposing of his used safety-razor blades, because, in the back of the seat, there is a slot where they can be dropped. The clothes chute is conveniently placed near the door.

The tile floor and black tile base blend very well with the peach-colored walls and silk and rubber shower curtain.

Again coming out into the hall, you will note the unusually large and commodious linen closet. Enough room here for all the bedding, too.

Going back downstairs you now go through the grade door to the garage, which is attached to the house and but a step away. The doors fold back and are held in place by an automatic catch, which prevents the wind blowing them shut. Notice, please, that the garage floor is raised one inch above the driveway. When the doors are closed they shut tight against this edge, thus preventing rain, snow and wind sweeping into the garage under the doors. Inside, the walls are plastered, there is a water tap, a radiator and a double convenience receptacle for a trouble light.

All exposed walls in this residence are insulated, thus making the house cooler in summer and warmer in winter. On all inside walls a gypsum lath is used as a plaster base.

All concrete work, including the ten-inch foundation wall, was done by our own crew with our own equipment.

The siding is of gray shingles and the roof of variegated shingles. These, being stained instead of painted, are very inexpensively kept up.

In conclusion, I want to say that the "Music Box Cottage" stands as an example of good workmanship. Whether our customers wish a moderately priced bungalow or the most elaborate home, we are prepared to serve them.

Whatever we build, the workmanship will be identical with what you have just examined in this home.

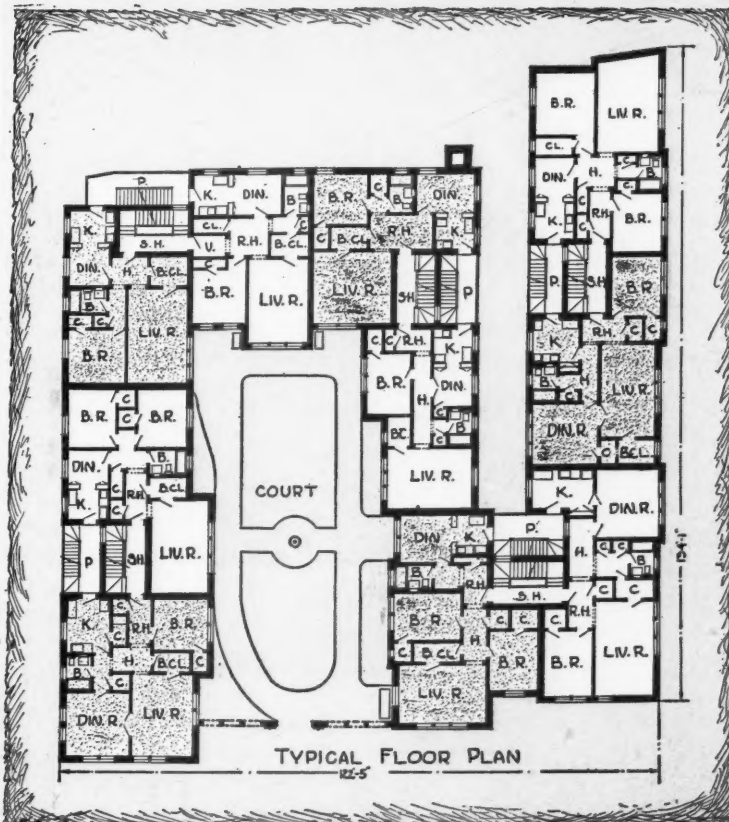


WE are pleased to present on the eight pages following a new feature—a new method of illustrating building designs—which we believe our readers will enjoy. Duotone engravings printed on enamel give these plates depth and richness without obscuring details and without garishness.

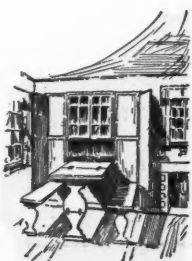
Our editors and architectural advisors have used great care in selecting these nine designs. They include homes, apartments and business buildings. They contain many a good suggestion and usable idea.

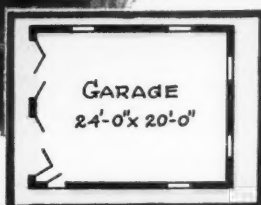
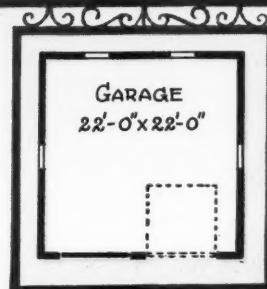
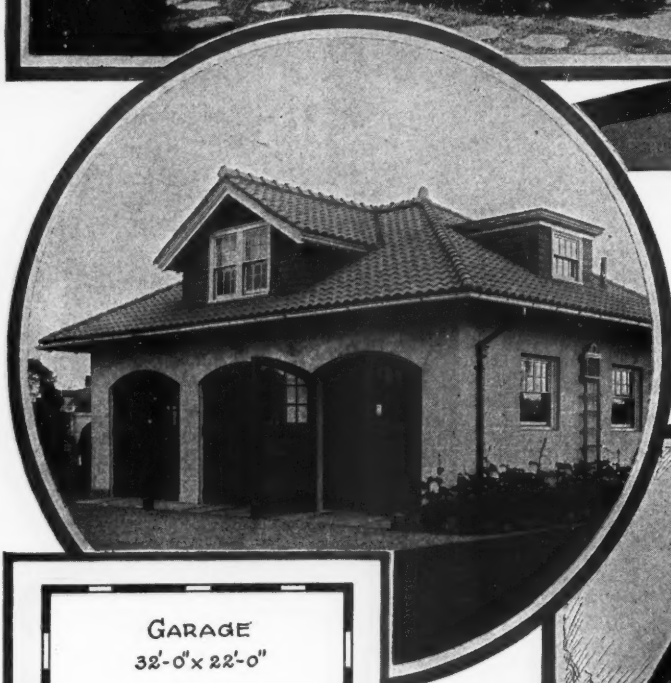
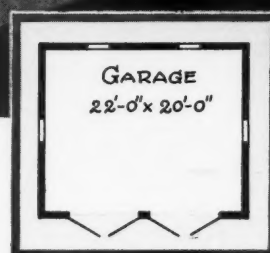
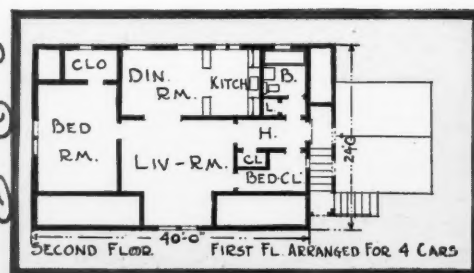
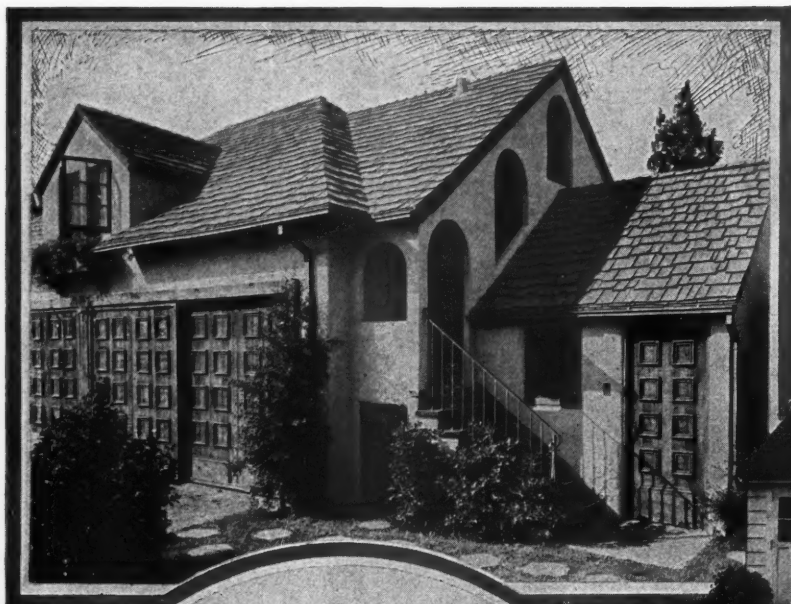


THE PAULINA MANSIONS
OAK PARK, ILL.
TURBYFILL & MOHR,
ARCHITECTS,
CHICAGO.

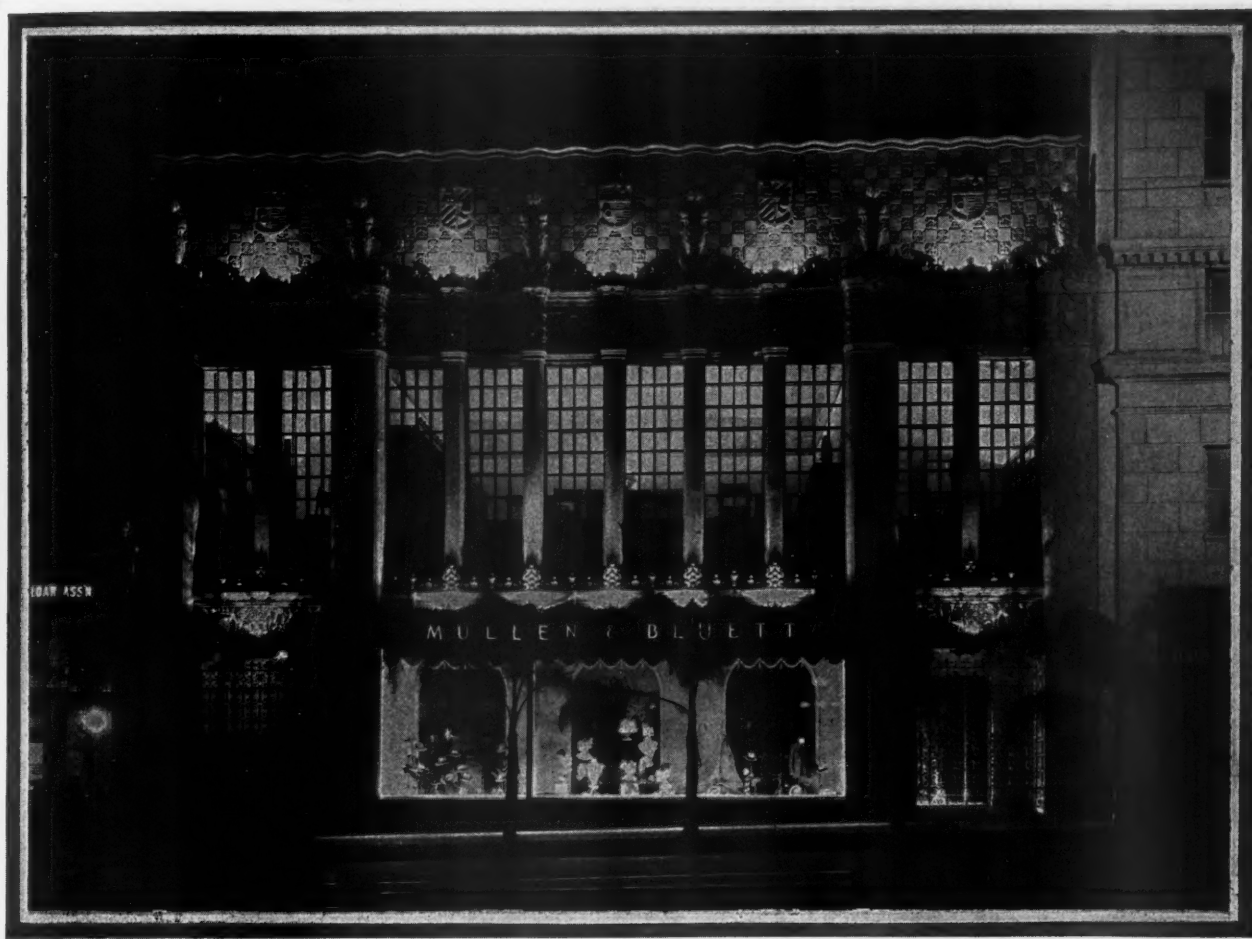


30
Three & Four
Room
Apartments
Impressively
Arranged

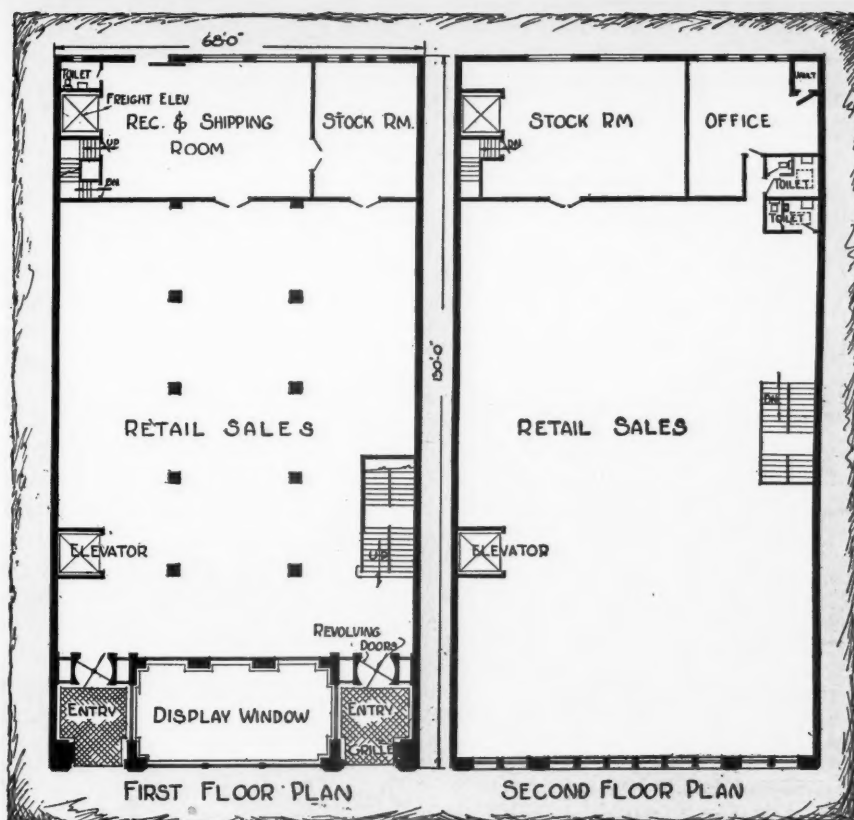




Smart Garages to Match Five Types of Homes



MORGAN, WALL
& CLEMENTS,
ARCHITECTS,
LOS ANGELES.



Architecture
Aids
Advertising

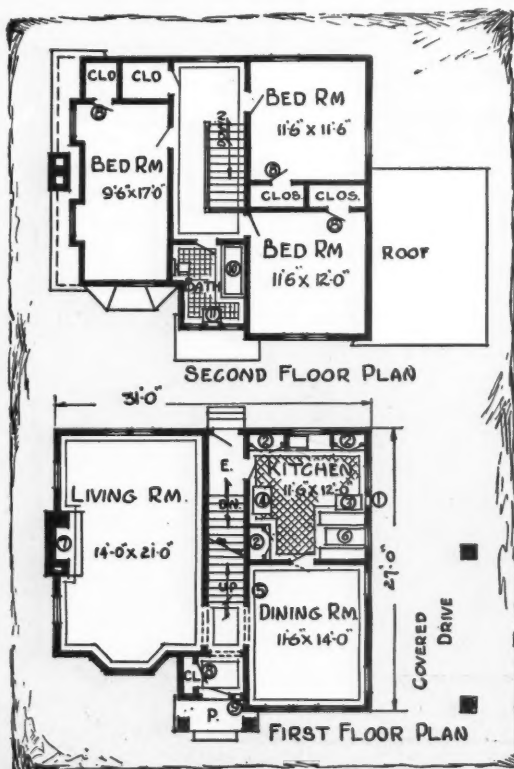


Night scene showing display windows and illumination of a very successful retail store at Pasadena, Calif.



Extra Wide Siding is a Feature Here

A GENEROUS welcome is felt in the atmosphere of this home. Brightness and cheerfulness are in the big living room with its full-length bay windows in front, its outlook in three directions, and its real wood burning fireplace. The dining room to the right of the reception hall is likewise a most cheerful room and the kitchen opening from it is a model of convenience. Upstairs are three large bedrooms, four closets and the bath. This house measures 27 by 31 feet; but bringing the main roof down and out to cover the drive makes it appear much larger.



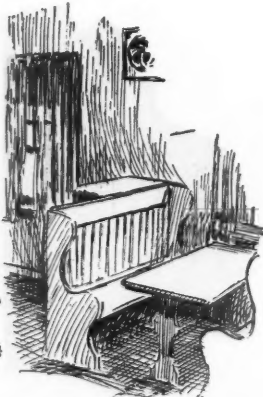
Key to Recommended Specialties of Equipment

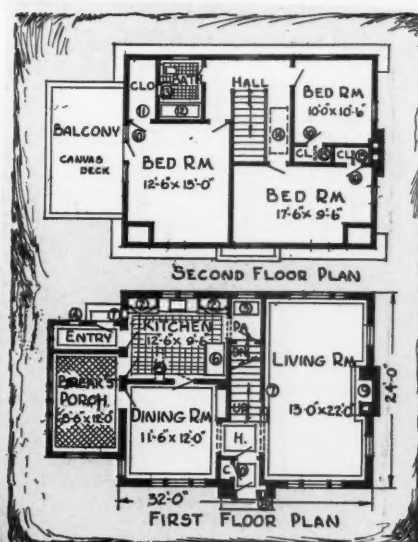
The small numbered circles on the plans represent the following:

- 1.—Kitchen Ventilating Fan
- 2.—Kitchen Cabinets
- 3.—Refrigerator
- 4.—Range
- 5.—Thermostat
- 6.—Breakfast Nook
- 7.—Fireplace Throat & Damper
- 8.—Mirror Door
- 9.—Built-in Mail Box
- 10.—Tub Shower Bath
- 11.—Medicine Case

In addition to the above many items of modern equipment must be considered:

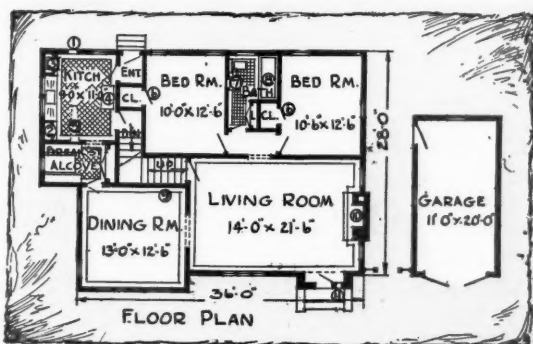
- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture
- Disappearing Attic Stairs



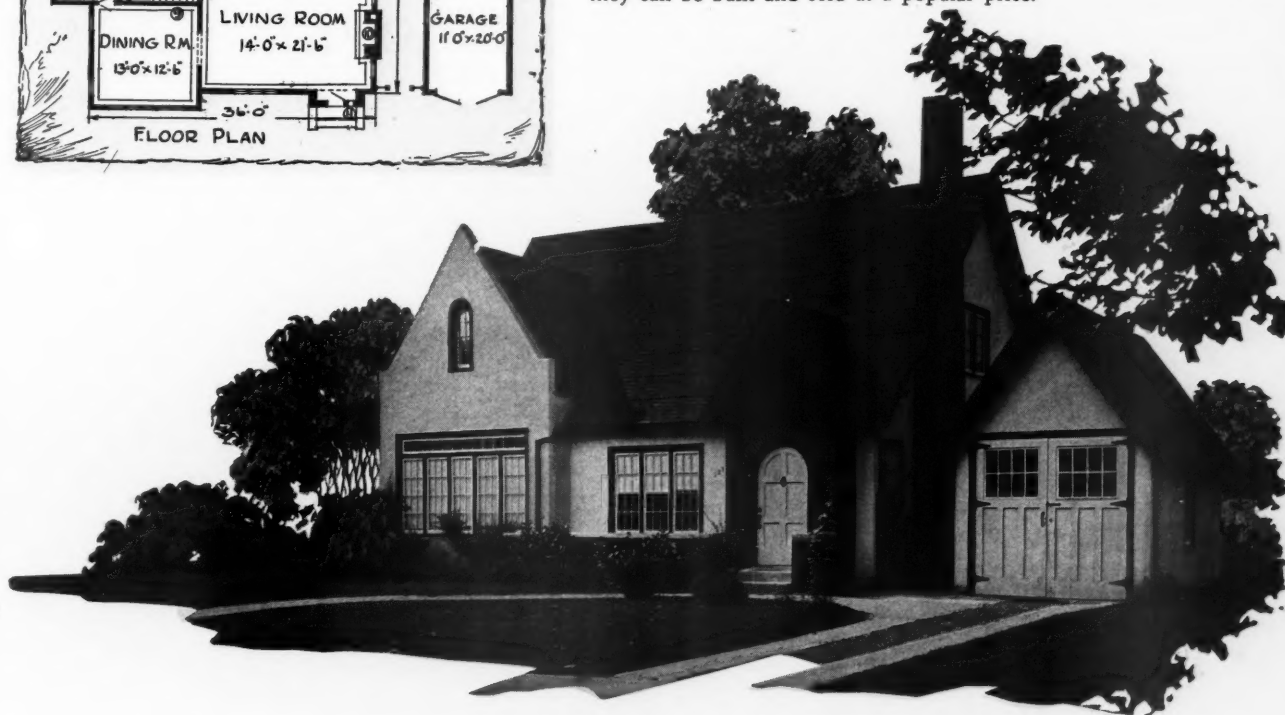


Whether you like the speckled roof or not—

Here's a good Dutch Colonial



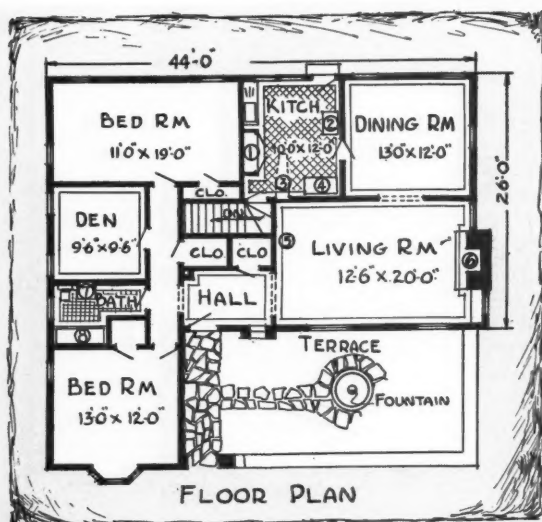
IT isn't so easy to plan a small house, to give it style, good looks and convenience, and still hold the cost down. It can be done, however, and on this page we illustrate two very successful little homes. Above we have a perfect little Dutch Colonial of six rooms, 32 by 24 feet in size. A combination of stucco, brick, and shingles makes the exterior interesting. Below is a 5-room bungalow with garage to match, all in the smart English Tudor style. Both of these little homes are laid out sensibly, so that they can be built and sold at a popular price.



The English Tudor Details Take This Little Home out of the Commonplace



Smart French Design Cottage with Enclosed Garden



A DELIGHTFUL feature of this plan is the cloistered entrance, skirting the private garden or terrace with its flagstone walk and fountain. Within the house six rooms and bath are found. The entire design has a quaint over-seas flavor.

Key to Recommended Specialties of Equipment

The small numbered circles on the room diagram refer to the following:

- 1.—Kitchen Case
- 2.—Refrigerator
- 3.—Ironing Board
- 4.—Range
- 5.—Thermostat
- 6.—Fireplace Throat & Damper
- 7.—Medicine Case
- 8.—Tub Shower Bath

Besides these, every builder will, of course, want to study the many items of equipment that are needed to complete the modern homes:

Weather Strips
Storm Sash
Screens
Lighting Fixtures
Convenience Outlets
Electric Panel
Washing Machine
Ironing Machine
Clothes Dryer
Coal Chute
Heating Plant
Oil Burner
Water Supply System
Hot Water Supply
Water Softener
Radiant Gas Heaters
Electric Wall Type Heaters
Casement Windows
Dishwashing Sink
Automatic Cellar Drainer
Radiator Covers or Furniture
Disappearing Attic Stairs



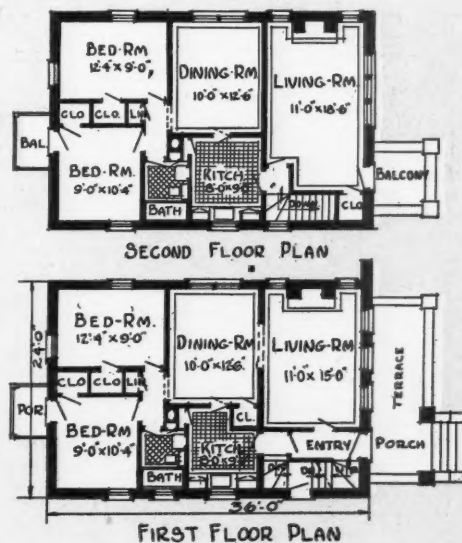
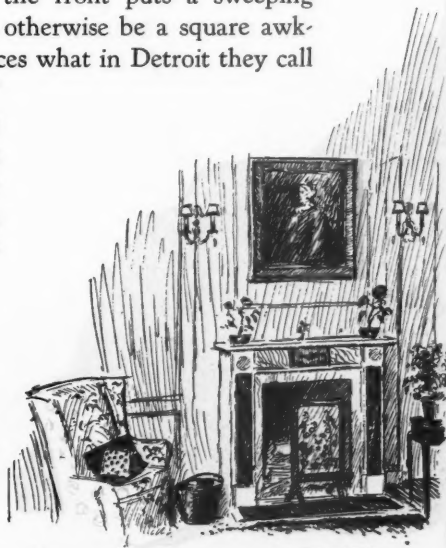


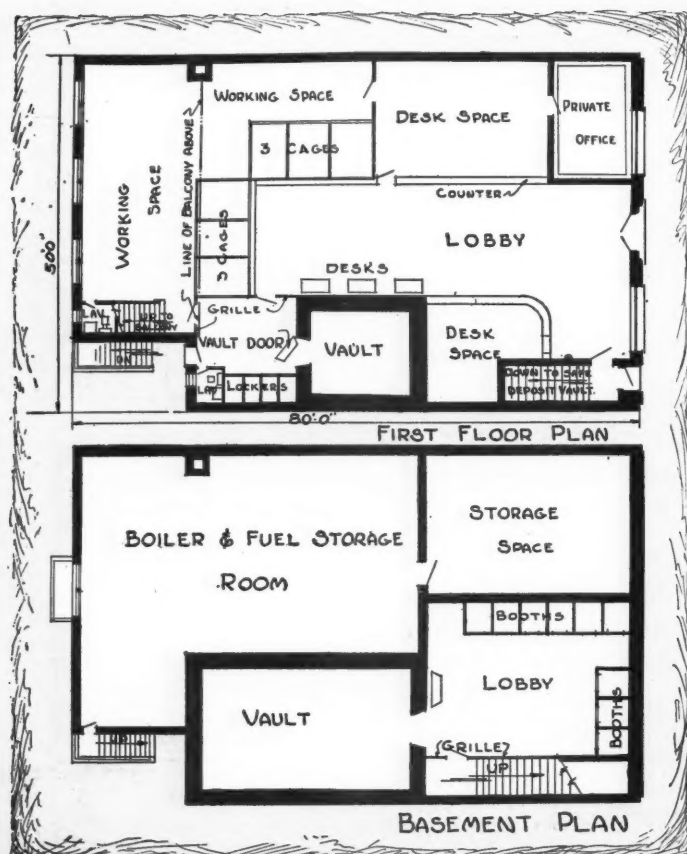
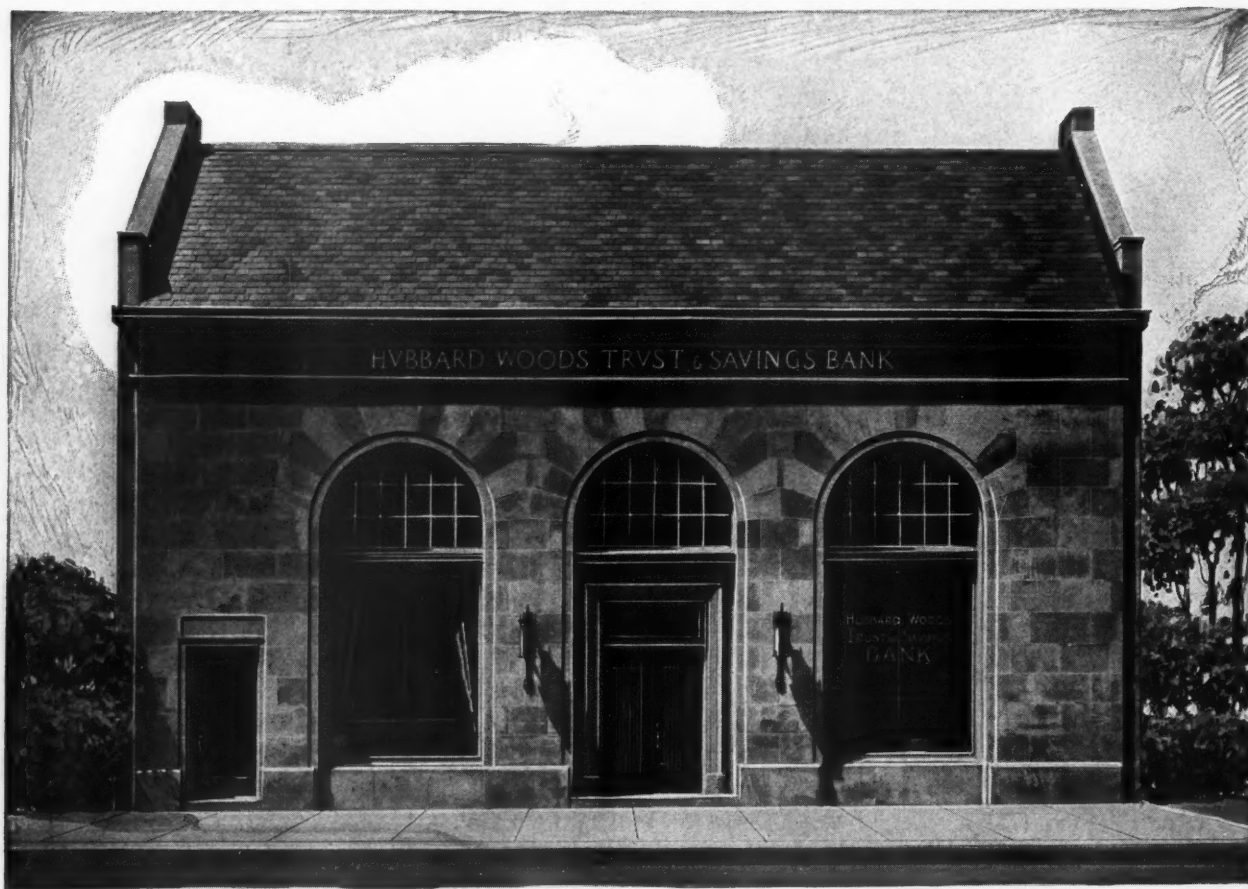
The Popular Detroit Type "Income Bungalow" or Duplex

DESIGNED AND BUILT BY ROSCOE W. BABCOCK, INC.

IN many communities they want the income feature of the two-family home, but object to the outward appearance of the two-flat, as usually built. A little camouflage at the front puts a sweeping gable onto what would otherwise be a square awkward facade, and produces what in Detroit they call an "Income Bungalow."

The owner lives on the first floor and rents out the second. Both enjoy a convenient five-room apartment. Where building ordinances require an additional or service stairway for the second floor apartment, the building is made deeper to permit of an inside stair just back of the kitchens.

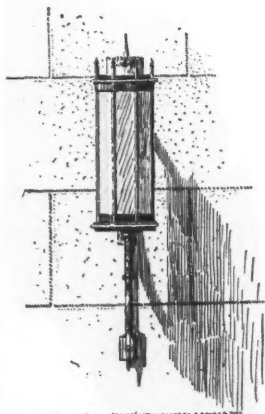




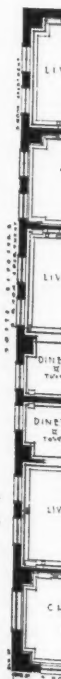
Dignity and Grace in a Small City Bank

The Hubbard Woods, Illinois,
Trust & Savings Bank

W. S. CROSBY, ARCHITECT
CHICAGO.



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APARTMENT HOMES



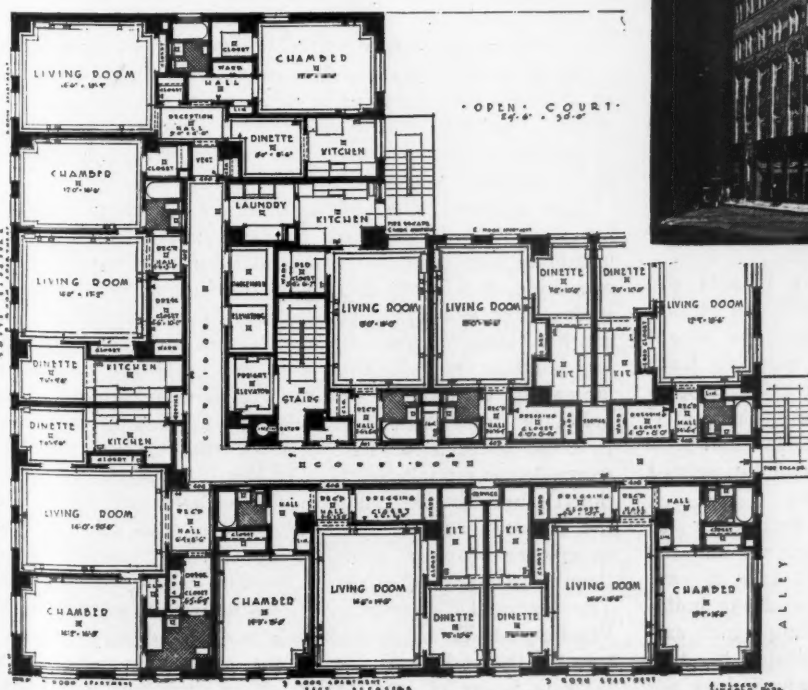
A Skyscraper Apartment Faced with Bright Colored Terra Cotta and Brick

B. LEO STEIF AND CO., Architects

CHICAGO'S first skyscraper having an exterior faced with materials in bright shades of color is the 19-story apartment and exclusive shop building recently completed at the northwest corner of State and Elm streets. The first floor of this beautiful structure is of dark French blue terra cotta. The second, third and fourth floors are a light blue green terra cotta. The five top floors are a multi-colored terra cotta of five hues, while the mass of the structure is a salmon colored face brick.



With Its Lower and Upper Stories Faced with Dark French Blue and Multi-Colored Terra Cotta and the Mass in Salmon Colored Face Brick, This 19-Story Apartment Building Presents a Striking Picture.





Each Apartment in the Building Is Equipped with All the Most Modern Conveniences, Including an Individual Electric Refrigerator Operating Independently.

The interior of the building is divided into 120 unfurnished apartments of from two to five rooms, all equipped with the latest conveniences, and one of the most outstanding of which is the individual electric refrigerator installed in each apartment.

This newest household electrical servant has become so desired by tenants that apartment owners all over the country are interested in purchasing the type of equipment which will give tenants the most satisfactory service and which will make the best investment for themselves.

The B. Leo Steif & Company, who designed this building, believed that the ideal refrigeration unit for the apartment house was the one that was self-contained. They found them easy to install as special plumbing or wiring were unnecessary. Accessibility is probably second in importance as there is no danger of leaks, corrosion requiring repairs, etc., in inaccessible places, not only to the plumbing but to the walls and floors that must be opened up in order to repair the leak.

The individual unit is portable; it requires only an electrical connection to put it in operation. This simplicity enables the tenant to move it from one part of the kitchen to another if desired.

The flexibility of control appeals to both tenants and owners. Refrigerators in apartments not rented can be shut off when not in use, and if a unit fails only one tenant is affected and the unit can be replaced very quickly. Each tenant can have his refrigerator set for the exact temperature regulation desired. When defrosting is necessary, the tenants are not inconvenienced by a general shutdown of refrigerators in all apartments, as each tenant can defrost his refrigerator without disturbing the others.

The individual system allows the tenant to pay for the electricity consumed by his unit. If owners assume the burden of furnishing the electricity it will take a very material amount from the operating revenue of the building. From an investment standpoint a building which carries in its operating costs the expense of running the tenants' refrigerators is worth less than one which does not have this expense.

Training for Success

(Continued from page 41)

"Hello, John, who died?" the medical student shouted. "You look as if you were about to chuck it all."

"Might as well," answered the other, dejectedly. "I've been discharged—fired! What hurts most is that I lost my job unjustly. They didn't give me a chance to tell my side of it." He swallowed hard to hide his disappointment and looked into his friend's eyes, hoping to find sympathy there.

"Discharged, eh? Well, it serves you right. You deserve it!"

The dejected one stared in amazement. "Why, what do you mean?"

"You know as well as I do that in your line of work you'll never get anywhere without a technical education," said the medical student. "As long as you have no training, anybody can take your place. That's why they didn't hesitate to fire you, without hearing your story. Sympathy you want, eh? Well, I'm too good a friend of yours to give you any as long as you refuse to help yourself." Then he left hurriedly, disgusted with his chum.

It was the spark that fanned the fires of ambition into flame. That night, in bed, John Hocke tossed away the hours, sleepless, worried, thinking hard. By morning he had decided to get a technical education, or die in the attempt. Hocke had always wanted to be an architect, and now he set out to master that profession while working. When he finished his course, he found employment as superintendent of a construction company.

While working for others, Hocke went after work to do in his spare time. He was actively engaged in community work, and it was while attending an improvement association meeting one day that he met the man who was responsible for his going into business for himself. This man was a prominent builder, who frequently required architectural services. The builder gave Hocke considerable business, and it was not very long before Hocke had so much outside work he decided to go into business for himself. In the more than four years since Hocke became his own boss, he has risen from an almost unknown architect to a place of prominence in his profession. He has made plans for hundreds of buildings of all sorts. Looking back over the rough road he himself traveled and viewing the prospects in the building industry today, John Hocke has this to say to those who want to succeed in the profession:

"Make yourself wanted by getting a technical education so that you may combine it with common sense and hard work. That is a formula by which none can go wrong. Competition today is keen. The fellow who does not use every available means to equip himself is lost."

Thus it goes. The building industry is calling for men, but they must be trained. Success stories like these are becoming more frequent every year for two reasons. For one thing, the nation is actively building and the building trades offer abundant opportunities as a life calling. For another thing, the facilities for training men, for the building industry as for other lines of work, are constantly increasing, to meet the demands of modern business. Not only are full-time schools turning out students equipped to build great structures and beautiful homes, but correspondence schools are also finding a place in the educational scheme of the industry. These latter schools fit into the picture because they enable men who get practical experience at their work during the day to master the theoretical phase of their profession in their spare time. The National Home Study Council, with headquarters in Washington, D. C., is becoming one of the important factors in the industrial life of the nation, by acting as a clearing house of information about accredited correspondence schools.

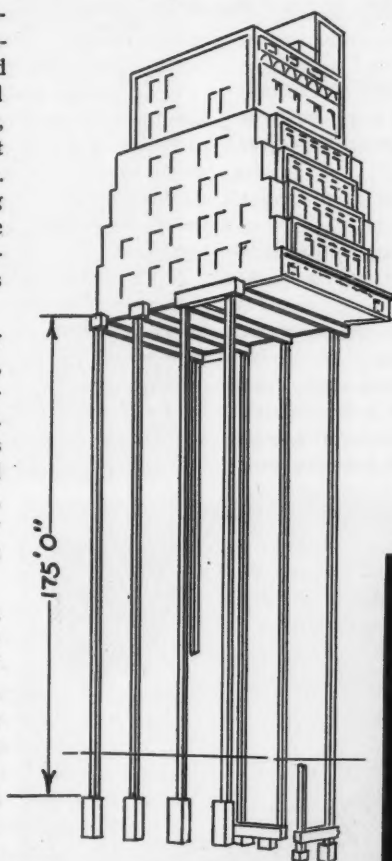
Setting Extra Stories on Stilts

How an Unusual Engineering Feat Added Six Stories to a Building Not Originally Designed for Additional Height

AN unusual if not unique engineering achievement in steel construction was recently completed in New York City. The feat consisted in adding six stories to an office building, at 7-11 E. 40th Street, which was not originally designed for additional height. What makes the job more interesting still, is the fact that all this was done while the old building remained completely tenanted and with elevators running!

David Gutman, a consulting engineer at 100 E. 45th Street, New York City, accomplished this unusual job by literally setting the additional stories on stilts. The sketch reproduced herewith shows how the additional stories are supported on eight new columns, 175 feet in length, which were set in place in such a way that tenants in the old building were not disturbed.

Columns of the old building were left unmolested but were used to brace the new columns for the right hand wall of the building, facing front. On this side, new columns were placed alongside yet outside of the old columns and were braced to the old columns by specially designed bracing. Ordinary footings were used for the foundations of the four new columns on this side of the building.



Eight New Columns, 175 Feet in Height, Which Support the Six Stories Added to This Building, Were Placed Without Disturbing the Tenants.

On the other side, four new columns were also set, but in this case the adjoining building was not owned by the same party and it was necessary to keep new construction within the limits of the old building so that the new columns were not set in a straight line nor were

new columns on this side appears in the form of pilasters on the side of the finished building.

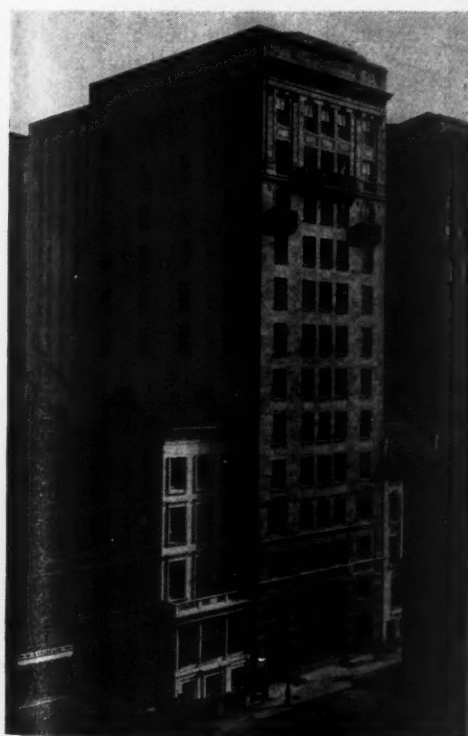
This remarkable feat was accomplished within a period of six months and at surprisingly low cost.

In architectural style the building now presents the latest in step-backs.

they placed close enough to old columns to brace. In this case, the new columns were attached to the beams of the old building. To secure suitable footings for the columns on this side it was necessary to straddle the footings of the old columns as shown in the sketch.

On this side of the building, the engineer was assisted by the fact that the space all along the side was occupied by elevator shafts, ventilation shafts and toilets, so that it was possible to run columns without disturbing holders of office space.

On the other side, new columns were placed outside the old as heretofore explained, so that construction could be carried on while tenants continued to occupy offices. The protrusion of the



The Old Building to Which It Was Desired to Add Six Stories Was Not Designed to Support This Additional Weight.



The Completed Job, Really Two Buildings One Above the Other, Has the Appearance of a Single, well Designed Building.

Safe Guarding the Purchaser of Co-operative Apartment Units

By FRANK J. O'BRIEN,

Vice-President, McKey & Poague, Inc., Realtors, Chicago

A SITE for a projected apartment building to be owned co-operatively by its tenants should be so chosen that there is almost a positive assurance of enhancing ground value. Such a selection is, of course, excellent for any purpose, but for a co-operative apartment project it is essential.

Here are the essentials for the protection of a tenant owner in such a project:

1. The site should be in a district with a promising future, one which incorporates all the requirements of a well-selected residential site.

2. The building itself should incorporate the best of materials and the best of workmanship.

3. The layout and provision for ventilation and light should be such as would be incorporated in a fine single family residence, and this should be the case even though the apartment building is to be one of the lower priced

co-operatives. The rooms should be large, the layout commodious and practical.

4. To please apartment dwellers who want to own their apartment homes every such unit must have an abundance of closet space, and all the niceties included in the modern single family residence. It must have electric refrigeration, ventilating fans for the kitchen, ample cupboard space, linen chests and the most modern and complete bathroom equipment.

5. To protect the purchaser in the new legal relationships which have arisen as a result of the new form of home ownership created by the co-operative apartment movement, the legal forms used in the setting up of the organization must conform to the standards worked out by the National Association of Real Estate Boards, which has set up a Consultation Bureau to advise on co-operative building projects in their formative stage.

6. Escrow agreements should be used as a protection both to the purchaser of the individual apartment and to the man whose capital is making possible its development.

The escrow should provide a down payment with the application, a method of payment of balance on or before occupancy of the apartment. It should provide also at what period in sales activity the escrows should be closed out and delivery of title for apartments shall be made to all purchasers in the development.

The escrow should provide that no money shall be turned over to the developer until such time as the building is sold and until such time as payment of the completed building is assured, free of mechanics' liens.

It is unfair, unjust and hazardous for a developer to permit purchaser to pay his equity either in cash or note until such times as the developer knows the building is to be completely sold.

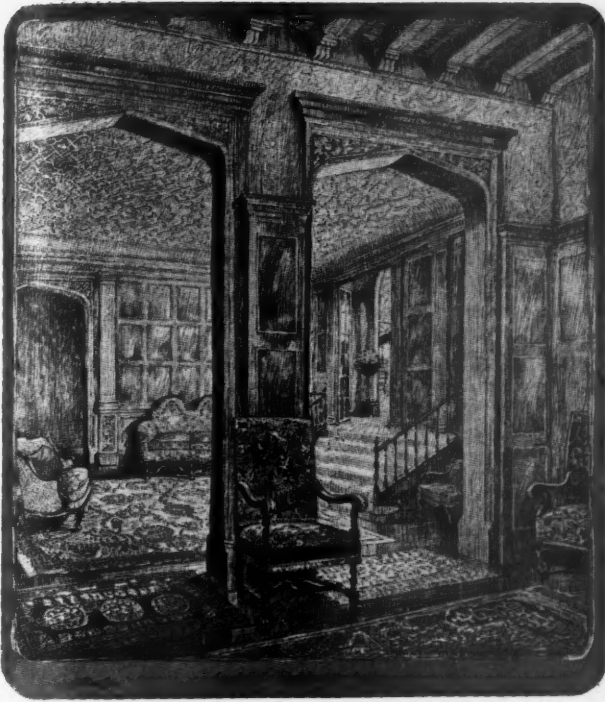
Any variance from this policy jeopardizes the purchaser's interests, and develops real dangers to the progress of co-operative apartment development.

In choosing the site for a private residence it is necessary, of course, to consider transportation, presence of churches and schools, parks, pleasantness of outlook, and the like. But, in addition to these things, the co-operatively owned apartment building site must be chosen so that there is, as nearly as may be, a positive assurance of enhancing ground value. This is to offset the inevitable depreciation of the building.

Obsolescence is inevitable in all buildings, but whatever depreciation may be suffered by the improvements through the years in which the building is in use, are, as a matter of experience, often entirely offset by enhance-



Architect's Sketch of One of Chicago's Newest Co-Ops. in the Fashionable South Shore District—Harold C. Costello, Builder—McKey & Poague, Inc., Exclusive Sales Agents.



The Lobby of 6901 Oglesby.

ment of land values, and the investment is amply protected.

One of the largest questions in the mind of a buyer of a co-operative apartment is bound to be—What will be the actual cost of occupancy for such an apartment home?

The home buyer in the case of a co-operative apartment is at rather an unusual disadvantage in estimating for himself the cost of keeping up his home. He may know fairly well what the hiring of a furnace man and the repainting of the porch screens may cost in a private dwelling house, but he is likely to know little from his own experience about the cost and upkeep for an apartment building.

For this reason it is extremely important that the probable maintenance costs for a co-operative apartment project be carefully estimated in advance by the developer before he puts the building on the market.

Fortunately for the co-operative apartment movement which has become such a factor in a number of the principal cities of the country, few if any instances have

occurred of the under figuring of maintenance costs.

The tax item is the one item of maintenance cost which is least predictable.

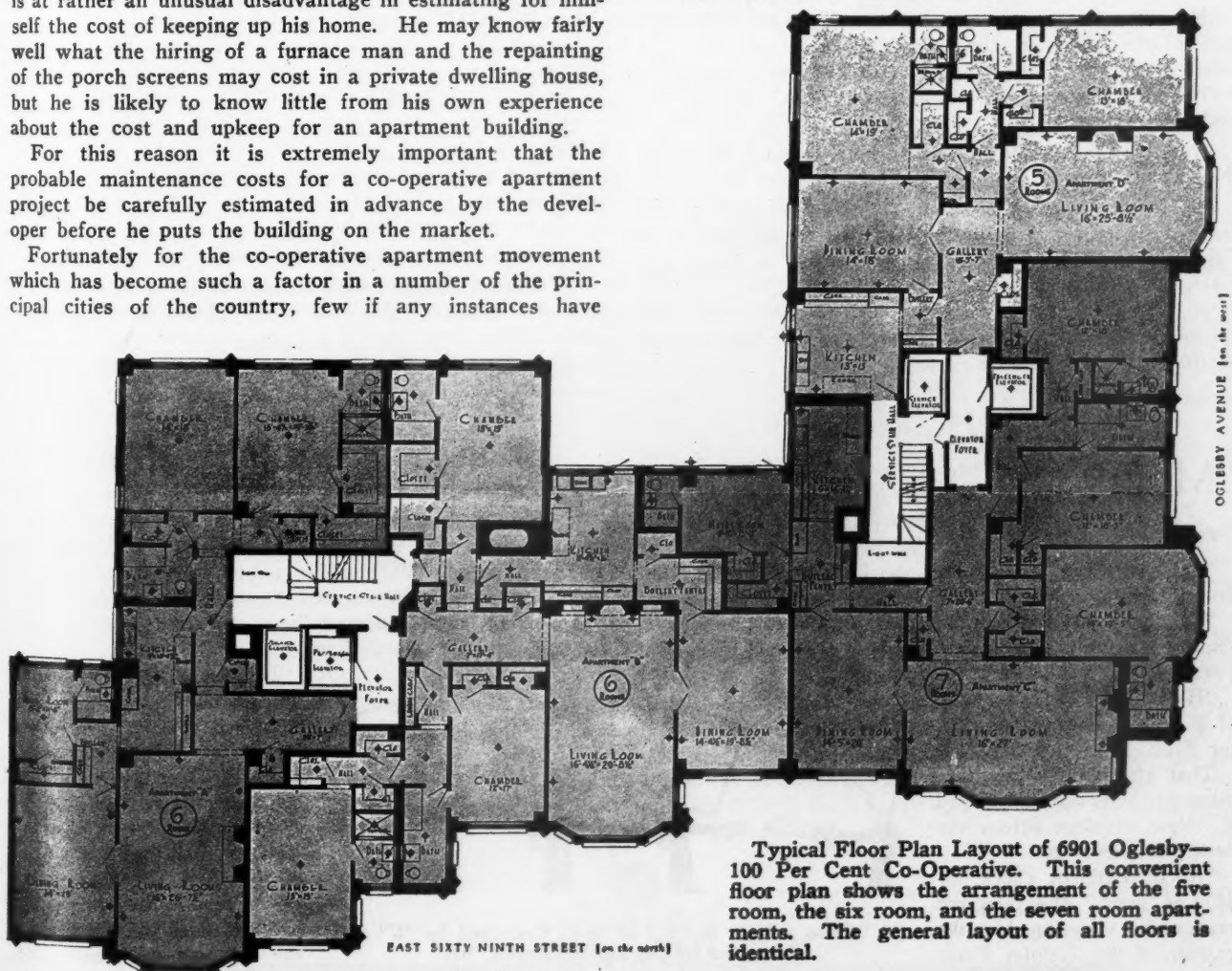
Outside of the uncertainty of what the municipality will do in assessing taxes on a building, there would be comparatively slight financial risk involved in guaranteeing to the purchasers of a co-operative apartment the maintenance budget for the building for a period of years. But such a guarantee seems neither fair nor necessary.



Advertising a Co-operative Apartment

CONTRARY to the prevalent belief there is nothing new about the co-operative idea of home ownership. The early history of the co-operative apartment movement in this country was marked by buildings which were filled practically entirely by those associated in the building, or their friends. When the idea got under way the promoters of this type of home found that it was necessary for them to run educational advertising; and so under the name of the Co-operative Apartment Association, a number of the New York builders, organizers, architects and sales agents of co-operative homes ran an extensive campaign of advertising, explaining the idea, the financing, and maintenance of this new type of dwelling.

Just when advertising should start for a co-operative project and how long it should be conducted depends upon whether there is a seasonal renting period in that city. If the renting season is scattered pretty evenly over the year it makes no difference when the campaign is begun, but when the renting season hinges around the first of May the advertising of a co-operative project should be started in October so those interested in buying their next home can make their rental arrangements.



Typical Floor Plan Layout of 6901 Oglesby—100 Per Cent Co-Operative. This convenient floor plan shows the arrangement of the five room, the six room, and the seven room apartments. The general layout of all floors is identical.

LAW for the BUILDER



The Builder and His Bank

"I GOT your letter the other day," the customer admitted.

"It's the sixth one I've written you, your account's up to nearly \$100, and must be paid," the builder reminded him.

"Take a deposit certificate of the X bank?" the customer queried.

"Yes, and mighty glad to get it," the builder agreed. The customer endorsed the certificate and the next morning the builder deposited the certificate in his own bank, received credit for the fact thereof, and checked out the proceeds.

The next morning the cashier of the builder's bank telephoned for him to come to the bank "post haste."

"The X bank's been closed by the Commissioner, and your deposit certificate came back unpaid," the cashier explained, when the builder came in.

"No, it was your certificate," the builder demurred.

"No—it's yours, and we have the option of collecting the certificate either from the X bank, or from you, and you're the party we're going after, under the circumstances," the cashier declared.

"And I'll see my own lawyer before I stand the loss," the builder retorted.

The builder learned, however, that he had to stand the loss, as his lawyer explained to him that the United States Supreme Court in the case of *Armstrong vs. American Exchange Bank*, 133 United States Reports, 433, has laid down the rule that a bank, under such circumstances, may collect the deposit certificate either from the issuing bank or from its own depositor.



"Is This Check Good?"

"MY \$100 account has been past due for several months," the customer admitted.

"It certainly has been," the builder agreed.

"Take a check on the Popular Bank of Pershing?"

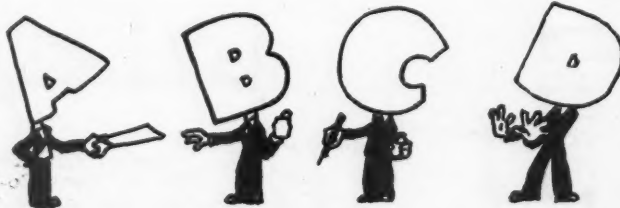
"Pershing's a long way off," the builder demurred, "but drop in this afternoon, and I'll let you know."

The customer departed, and the builder lost no time in sending the following telegram to the popular Bank of Pershing:

"Have been offered check of R. B. Holman on your bank for \$100. Is it good?"

That afternoon a telegram messenger boy came in, slipped a yellow envelope across the desk, and departed.

"R. B. Holman check for \$100 is good," the telegram read, and it was signed by the cashier of the Popular Bank.



"A" Gave a Note to "B." It Was Endorsed by "C" and Protested by the Notary Public "D."

Ten minutes later the customer strolled in, the builder accepted his check, deposited it in his local bank, the check went forward for collection, and came back from the Popular Bank, marked "no funds."

"You wired me Holman check was good, and will look to you for payment," the builder wired.

"Our first telegram did not promise payment Holman check, and we recognize no liability," the Popular Bank replied.

"Now, there are the facts and correspondence, and what I want to know is whether I have any case against the Popular Bank," the builder told his lawyer.

"You have not, I am sorry to say," the lawyer assured him.

"But I've heard of instances where a bank had to stand behind a telegram in a case like this," the builder demurred.

"There are lots of cases in the books where the bank was held liable," the lawyer explained, "but in all those cases the bank's telegram contained an

express or implied promise to pay the check. In your case, however, all the bank said was that the check was 'good,' from which you cannot extract anything that looks like a promise to pay the check when presented. You are in practically the same position as if the bank had wired, 'the check is good right now, but we will not guarantee that it will be good for ten minutes.'"

"Looks as if I were the victim," the builder admitted.

"Of course, you still have a right of action against your customer who gave you your check," the lawyer reminded him.

"And he went into bankruptcy yesterday," the builder averred.



Failed to Follow Instructions

"PLEASE ship the goods listed in the attached invoice, draw a draft on me and attach the bill of lading, to be delivered to me when the draft is paid," the new customer wrote. The builder shipped the goods, drew a draft on the customer, marked the draft "deliver documents on payment," and endorsed them, delivered draft and bill of lading to the local bank.

The bank, without insisting on the payment of the draft, detached the bill of lading, delivered it to the customer, and accepted from the customer his check drawn on a bank in another state, sent the check forward for collection, and it came back marked "no funds."

Whereupon the bank, which had advanced the proceeds of the draft to the builder, de-

manded that he reimburse the bank.

"You've got no case against me, when you took a chance on accepting the customer's check, without insisting on payment of the draft," the builder contended, and the Supreme Court of Washington in a recent case reported in 229 Pacific Reporter, 743, ruled in the builder's favor.

"Where a time draft attached to a shipper's order bill of lading is left with a bank for collection, the bank must hold the bill of lading until the draft is paid as security for payment of the draft as a cash transaction," said the Court, quoting from a decision of the United States Supreme Court in 91 U. S., 613.



The Notary's Mistake

A HAD given a note to B, a contractor, payable at a Mississippi bank, C endorsed it, the note was dishonored, protested, and the Protesting Notary Public notified C, the endorser.

"I, the said Notary Public, did duly present the said

note, at the office of A, the maker, and demanded payment, which was refused," the notice of dishonor stated.

"The note should have been presented at the bank where it was payable, the notice of dishonor is insufficient, and I am released from my liability as endorser," C might have said—but did not.

"I'll pay it, if A does not," is what C actually promised. When B pressed for payment, B sued C as endorser, and C set up the defense that he had not received a legal notice of dishonor.

"I admit that, but when the note was dishonored, and you were notified your promise to pay would cover any defect in the notice," B retorted and the Mississippi Supreme Court ruled in his favor in 111 Southern Reporter, 578.

"It is clear from the evidence that, if C received and examined the notice of dishonor he knew of its defects; and that, if he did not receive the notice, as no representations appear to have been made to him relative thereto, he must have acted on the theory that no such notice had been given to him," said the court.

M. L. HAYWARD.

What Does the Average Dwelling Cost?

(Continued from page 45)

TABLE 2—AVERAGE COST OF DWELLING ACCOMMODATIONS PER FAMILY IN CITIES HAVING A POPULATION BETWEEN 200,000 AND 500,000, BY KIND OF DWELLING: PERMITS FOR FIRST 6 MONTHS OF 1928

City	Number of families provided for	Average cost per family	City	Number of families provided for	Average cost per family
One-family dwellings			Multifamily dwellings¹		
Dallas, Tex.	411	\$2,671	San Antonio, Tex.	500	\$1,134
Birmingham, Ala.	1,083	3,008	Birmingham, Ala.	534	2,041
Seattle, Wash.	1,405	2,482	Atlanta, Ga.	484	2,181
San Antonio, Tex.	1,140	3,763	Oakland, Calif.	649	2,459
New Orleans, La.	241	3,886	Minneapolis, Minn.	469	2,738
Oakland, Calif.	848	3,903	Rochester, N. Y.	625	2,826
Toledo, Ohio	710	4,178	Dallas, Tex.	82	3,015
Minneapolis, Minn.	647	4,184	Seattle, Wash.	1,000	3,084
Portland, Ore.	747	4,216	Kansas City, Mo.	634	3,138
Atlanta, Ga.	1,021	4,320	Denver, Colo.	453	3,243
Kansas City, Mo.	507	4,672	Indianapolis, Ind.	517	3,277
Indianapolis, Ind.	719	4,699	New Orleans, La.	70	3,316
Columbus, Ohio	664	4,356	Toledo, Ohio	70	3,429
Denver, Colo.	683	5,119	Providence, R. I.	182	3,738
Louisville, Ky.	490	5,273	Jersey City, N. J.	807	3,791
Rochester, N. Y.	445	5,373	Omaha, Neb.	35	3,805
Omaha, Neb.	168	4,327	Cincinnati, Ohio	801	3,856
St. Paul, Minn.	308	5,337	Columbus, Ohio	484	3,907
Jersey City, N. J.	5	6,300	Portland, Ore.	340	4,373
Cincinnati, Ohio	880	7,840	St. Paul, Minn.	38	4,737
Providence, R. I.	247	9,612	Newark, N. J.	1,728	5,023
Newark, N. J.	30	9,841	Louisville, Ky.	253	8,301
Total (22 cities)	13,508	4,601	Total (22 cities)	11,575	3,457
Two-family dwellings¹			All classes of dwellings		
New Orleans, La.	866	2,037	New Orleans, La.	1,177	2,491
Atlanta, Ga.	249	2,114	Birmingham, Ala.	1,624	2,692
Indianapolis, Ind.	178	2,265	Dallas, Tex.	665	2,769
Oakland, Calif.	172	2,326	San Antonio, Tex.	1,728	2,988
Dallas, Tex.	127	2,387	Oakland, Calif.	1,224	3,135
Seattle, Wash.	14	2,968	Atlanta, Ga.	1,480	3,200
Minneapolis, Minn.	144	3,401	Seattle, Wash.	3,319	3,210
San Antonio, Tex.	88	3,480	Minneapolis, Minn.	1,260	3,357
Toledo, Ohio	88	3,957	Kansas City, Mo.	1,185	3,549
Louisville, Ky.	71	3,686	Indianapolis, Ind.	1,414	3,889
Denver, Colo.	34	3,750	Jersey City, N. J.	983	3,938
Portland, Ore.	68	4,000	Rochester, N. Y.	1,131	3,989
Birmingham, Ala.	7	4,129	Toledo, Ohio	866	4,059
Rochester, N. Y.	81	4,285	Portland, Ore.	1,329	4,312
Kansas City, Mo.	14	4,614	Denver, Colo.	1,170	4,353
Jersey City, N. J.	121	4,814	Columbus, Ohio	1,647	4,606
Cincinnati, Ohio	206	5,078	Newark, N. J.	2,076	5,244
St. Paul, Minn.	28	5,207	Omaha, Neb.	201	5,674
Providence, R. I.	225	5,278	St. Paul, Minn.	374	5,678
Newark, N. J.	288	6,115	Cincinnati, Ohio	1,967	5,948
Omaha, Neb.	8	10,000	Louisville, Ky.	823	6,067
Total (22 cities)	8,206	3,533	Total (22 cities)	28,280	4,612

¹ Includes 1-family and 2-family dwellings with stores.

² Includes multifamily dwellings with stores.

The average cost of all dwelling units in these 22 cities was \$4,012 per family. Providence, R. I., provided for 654 families at a cost of \$6,534 per family, while New Orleans provided for 1,177 families at a cost of only \$2,491 per family.

The average cost per family in the cities of 500,000 and over was more for each class of dwelling than in the cities in the lower population group. The cost of one-family dwellings averaged 12.3 per cent more in the larger cities than in the cities having a population of less than 500,000; the cost of two-family dwellings averaged 23.3 per cent higher; that of multifamily dwellings, 21.9 per cent higher; and of all dwelling units, 10.6 per cent higher.

Because of a lack of space, data are not shown separately for cities having a population of between 100,000 and 200,000. In

The average cost of one-family dwellings in these 22 cities was \$4,601. The cost range of this class of structure was from \$2,671 in Dallas, Texas, to \$9,841 in Newark, N. J.

The average cost of two-family dwellings was \$3,533 per family, ranging from \$2,037 in New Orleans to \$10,000 in Omaha.

Multi-family dwellings average only \$1,134 per family in San Antonio, but \$8,301 in Louisville, the average cost in the 22 cities being \$3,457 per family.

the 49 cities in this population group permits were issued during the first half of 1928 for 16,030 one-family dwellings at an average cost of \$4,502. Two-family dwellings cost \$3,805 per family for the 3,146 families cared for, while multifamily dwellings provided for 9,739 families at an average cost of \$3,801. The total number of families provided for in dwelling houses of all types in these 49 cities was 28,914 and the average cost per family of the dwellings provided was \$4,190.



HOW DAN DOES IT



A Department for Passing "Life Savers" along to other Builders

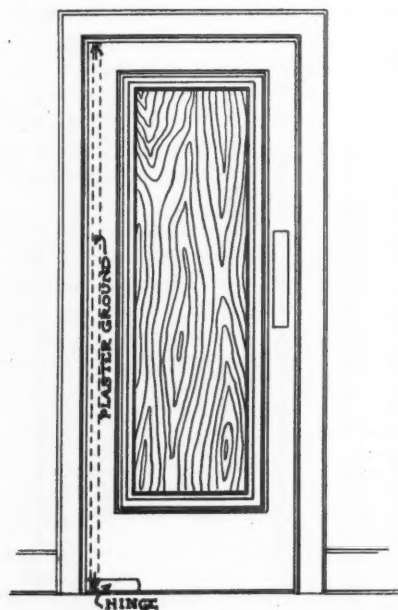
\$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

To Apply a Floor Hinge

I AM sending a description and sketch of my way of applying a floor hinge. I find that it is a very accurate way to get the length correct. I cut a piece of plaster



By Using a Piece of Plaster Ground in This Way It Is Possible to Get the Correct Length in Applying Floor Hinges.

ground long enough to reach from the floor to the top of the jamb. I then cut my door $\frac{3}{4}$ inch shorter than the plaster ground. When the door is fitted, ready to hang, I place the plaster ground on the edge of the door so that one end will be at the top of the door. I then place the hinge so that it will be at the other end of the plaster ground, as shown in the sketch. This will make the door fit properly at the top when placed in the opening.

A. E. JOHNSON, 215 N. Mulberry St., Statesville, N. C.



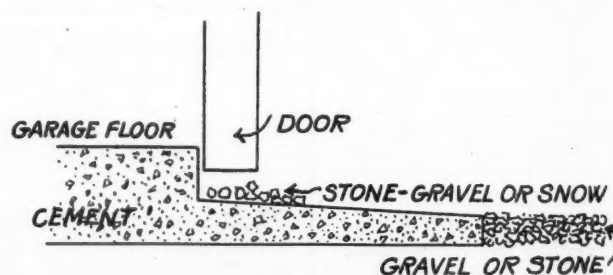
Another Garage Door Idea

BECAUSE of having had considerable experience with repairing garage doors that had been affected by snow and ice piling up at the bottom, I particularly noticed the illustrations in the April and September issues showing how to keep snow and rain out of garages. The method described by Mr. Tacinelli, in September, is good except that he does not drop the apron enough.

With the apron only $\frac{7}{8}$ inch lower than the floor and the door just clearing the apron, when the door is opened, snow, or crushed stone such as is so often used on driveways, gets between the door and the concrete and the door has to be forced in order to lock it. This strains the door and hinges.

Any car made today will easily pass over a two by four and so if the apron is dropped $1\frac{3}{4}$ inches the door will

have about $\frac{3}{4}$ inch clearance to let the snow or gravel remain on the apron and still clear it. The door can then



It Is Suggested That the Apron in Front of the Garage Door Should Be Dropped Sufficiently to Allow the Door to Clear Gravel or Ice That Collects.

be closed without straining it by forcing. This also allows for any sag in the door and most doors do sag some after they have been in use awhile.

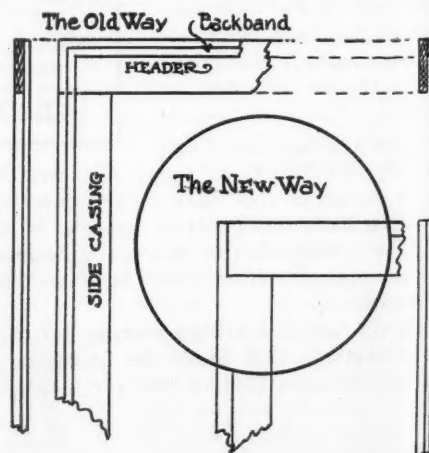
S. L. BROWN, 18 Tuscan Road, Maplewood, N. J.



Fitting Door and Window Headers

HERE is a way to put on a door or window header so as to conceal the end grain of the header. Cut the header about $1\frac{1}{2}$ inches shorter than the width of the casement, as shown in the circled portion of the sketch. Let the casing run up to the top of the header about $\frac{3}{4}$ inch wide. In this way you get the joint in the middle of the backband and after you put the backband on you cannot see where the joint is. I have used this method for many years and have found it very satisfactory.

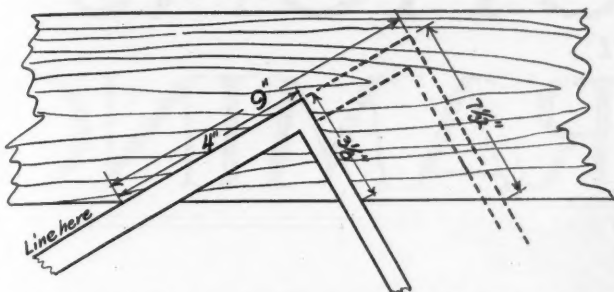
C. JOHNSON, Box 641, Stamford, Conn.



This Sort of Fitting Is a Simple Way of Obtaining a Neat Job on Headers.

To Multiply Fractions

HERE is a method of multiplying fractions by means of a steel square which is very practical and convenient.



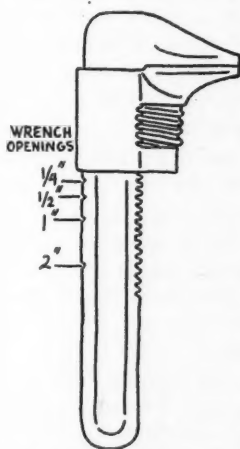
For Multiplying Those Bothersome Small Fractions a Steel Square Used Like This Is a Great Help.

nient. Say you wish to multiply $3\frac{1}{8}$ by $2\frac{1}{4}$. Lay the square on a straight edge with the tongue at $3\frac{1}{8}$ and the blade at any number which is easily multiplied by $2\frac{1}{4}$, say four, as shown in the sketch. Now, after making a line along the blade, move the square along this line to the figure nine, which is $2\frac{1}{4}$ times four. The number on the tongue will be found to be $7\frac{1}{32}$ which is $2\frac{1}{4}$ times $3\frac{1}{8}$. To divide small fractions the reverse of this process can be used. CHAS. P. KIME, 1273 Solomon St., Johnstown, Pa.



Handy Wrench Adjustment

TO avoid the endless aggravation of the trial and error method of obtaining different thumb nut adjustments



Marking the Wrench for Various Openings Saves Both Time and Annoyance.

to give certain wrench openings, I cut or file notches on the handle of a wrench as shown in the sketch. The notches are spaced, on the back edge of the wrench, at the most convenient distances for the user. They are placed below the slide bar at such points that when the slide bar centers a notch it gives a certain wrench opening that is used frequently. This is simple and saves a lot of lost motion when using the wrench a great deal. The notches may be spaced as close as $\frac{1}{8}$ inch, but I have found that openings of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and $1\frac{1}{4}$ inch take care of the sizes of nuts most used in my work.

BERT W. CULBERTSON, 608 Commerce St., Jackson, Miss.



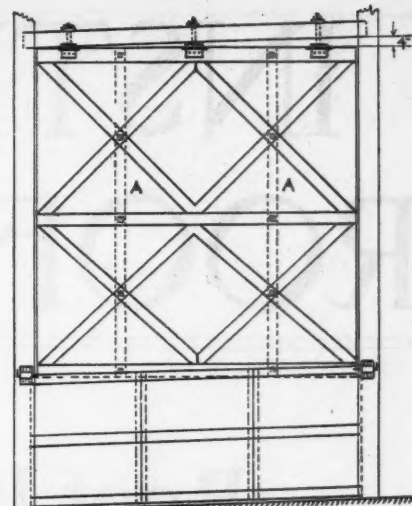
Fitting a Large Door to a Sagged Opening

THE foundation under a column in a warehouse had sunk and the big hanging door alongside it had been lowered four inches on one side so that it did not lap over one of the columns. A new door was to be put in and I had to fit it to these conditions. Here is how I did it.

This was a very large door with three loose doors underneath. Only the space directly in front of the door was available to work in so no scaffold or ladders could be used at the sides. Two ropes, running through two blocks in the ceiling were fastened on the upper side of the door and, together with the ropes for swinging the door open, provided means for lowering the door down onto the floor.

The three new horizontal pieces and the two new vertical pieces marked "A" in the sketch, were now cut, using the old ones as patterns. These five pieces were tacked together in the same position as the similar pieces on the old door. These were laid off square by the 3-4-5 method and checked by the diagonal method.

The left side was then tacked to the floor and the distance X-4, in the sketch, was measured in continuance with the right side, after which this side was pulled over till the corner reached the mark. This side was then tacked to the floor and the braces were put on.



INSIDE ELEVATION

This Opening Had Sagged, but a Bit of Ingenuity Made It Possible to Fit the New Door Perfectly.

After drilling the holes for the bolts, through the braces, at their crossings, and through the vertical pieces "A," the door was turned over and sheathed up. After the pieces "A" were taken off, holes in the sheathing were drilled over the other holes. The pieces "A" were put on and bolted. The door was then hung, using the same method as used for lowering. The new door not only fitted tight at the top but the small doors underneath could be more easily closed.

PAUL NESS, Fort Staunton, N. M.



How to Trim a Board End

IT frequently happens that a piece of material that has been cut to an inside measurement (as for example a piece of beveled siding intended to fit into a small space) is found to be just too long to force into place, but by such a slight margin as to make resawing difficult. Nor is planing off the end easy as one must plane across the grain.

In such a case a thin slice may be sawed off the end of the board, easily and neatly, by placing the end of the board to be sawed against the square end of another piece of the same material as shown in Fig. 1. Both pieces should be fastened to the bench or scaffold with small nails or clamps so that the ends fit tightly together. Then by running a hand saw through the line where the two ends meet (at "C" in the sketch) as in Fig. 2, the slice may be made as thin as necessary.

JOHN L. SCHOLL, Parkersburg, W. Va.



FIG. 1

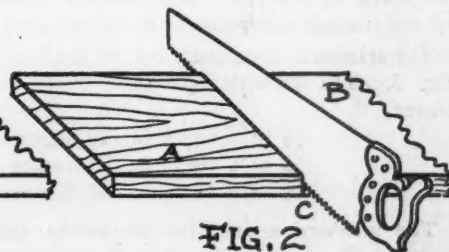


FIG. 2

Even the Smallest Fraction of an Inch Can Be Trimmed Off the End of a Board by Handling It as Shown Here.

INSTRUCTIONS in ROOF FRAMING



Roof Framing Simplified

By JOHN T. NEUFELD

WE might rather say "Roof Framing Explained in Its Simple Form." That is to avoid clothing it with mystery.

There is a saying that our present system of measure, based on feet and inches, is a survival of the time when the king's foot was the standard of measure and every time that a new king came on the throne the length of the measure had to be changed because of the difference in the length of the new king's foot. And the thumb was the smaller measure used.

We have improved a little on this but we are still using the cumbersome feet and inches in our work whereas other countries have long ago adopted the metric system, which is based on multiples of 10 and much more practical in its adaptation to our work.

In roof framing we have been doing something similar. We have been dealing with a somewhat complicated method because we feared that the working man would not understand the degree (which is really the standard measure for an angle.)

Replies received from our readers after publishing the article on "Framing by Degrees" have confirmed me, in the viewpoint that I have always taken, that the builder and the building mechanic were in general open minded, eager to learn and fully capable of understanding the mathematical problems involved in their work.

In roof framing the most important figure that we deal with is the triangle. A triangle is sometimes defined as a shape bounded by three straight lines. Another way of defining it is to say that the word triangle means three angles; and that a triangle is a flat figure having three angles. This definition may not stand all the tests of a geometric definition but it is good for our purpose. The angles are the figures that give us concern in roof framing.

Figs. 1 and 2 show where the right triangle appears in the shape of the roof; and also the different terms used for the triangle compared to the terms used in roof framing.

The standard of measure for an angle is the degree. See Fig. 3. The 1/360th part of a circle is a degree (one degree).

$\frac{1}{2}$ of a circle is 180 degrees.

$\frac{1}{4}$ of a circle is 90 degrees.

$\frac{1}{8}$ of a circle is 45 degrees.

The instrument used for measuring angles is the protractor. Fig. 6 shows a protractor used by mechanics and well adapted to our work.

There are generally two problems in figuring the rafter,

(1) finding the angle for each cut and (2) finding the length of the rafter.

If we add together the three angles of a triangle the result is always 180 degrees; and since in a right triangle the one angle is always 90 degrees it is evident that the other two angles together must equal 90 degrees. Now when the blue print gives the angle of the roof then all we do is subtract the given angle from 90 degrees and the result is the angle for the top cut of the rafter. See Fig. 5.

Fig. 7 shows the length of the hypotenuse of the triangle for each foot of base for the different angles. This we will call "Length of rafter per foot run." (Note that the length of rafter is the hypotenuse of the triangle and the run is the base (Figs. 1 and 2). Knowing the run of the rafter it is a simple matter to find the length.

The illustration in Fig. 8 is for a practice problem. There are two factors given, the pitch and the run.

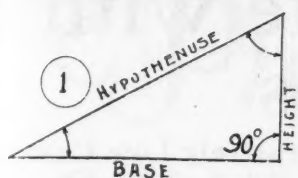
The pitch given in degrees also gives the angle for the seat cut. It remains therefore for us to solve for the top cut and the length of the rafter. The solutions are given in the illustration; however, a few explanations in regard to the solutions are in order. The length per foot run is taken from a table. There are two kinds of tables that can be used for this work. We may use a roof framing table based on the degree of pitch or we may use the regular tables given in books on trigonometry. In trigonometry we must look for the line of figures marked "secant." This is the same as the length per foot run. This will be explained more in detail later on in our articles; however, it is not necessary to understand such terms as secant, tangent, etc., to figure roof framing problems.

The length per foot run in Figs. 7 and 8 is given in feet and fractions of a foot. The answer then can readily be changed to feet and inches. A little reasoning will help us in this; take for example the answer 7.896 feet. This is 7 feet and .896 feet. We must change the .896, which is the fractional part, to inches. This we do by multiplying by 12, because there are 12 times as many inches as feet in any measure of length.

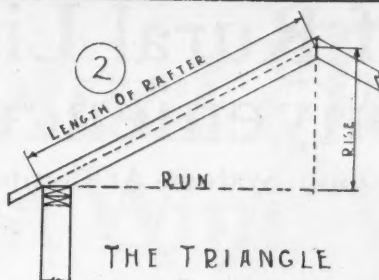
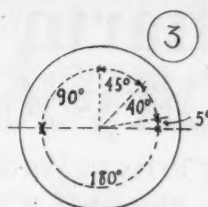
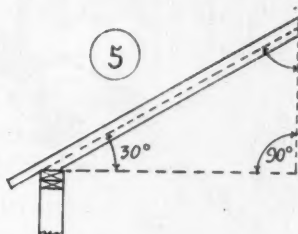
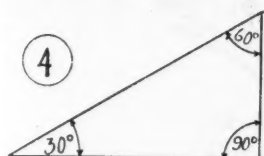
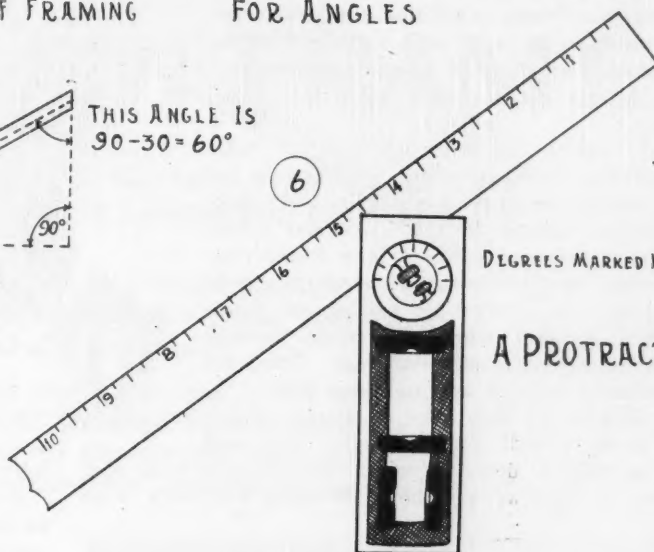
Thus $.896 \times 12$ is 10.752 inches, or $10\frac{3}{4}$ inches. The complete answer therefore is 7 feet $10\frac{3}{4}$ inches.

In this case we readily see that .752 inches is very near to $\frac{3}{4}$ inches. But supposing that we had the fraction .67 inches. If this is to be changed to sixteenths of an inch we must multiply by 16. Thus $.67 \times 16$ is 10.72 (sixteenths) or, in other words, almost $\frac{11}{16}$ and therefore it would be put down as $\frac{11}{16}$ of an inch.

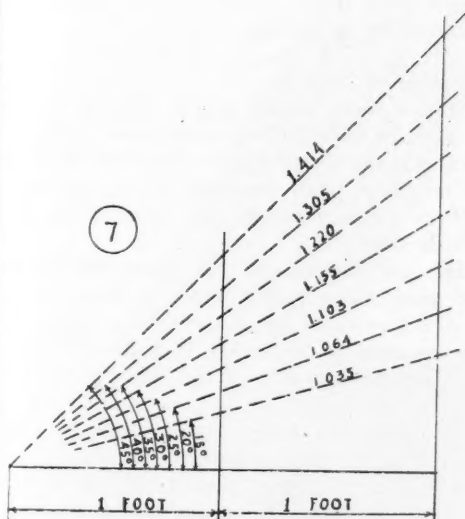
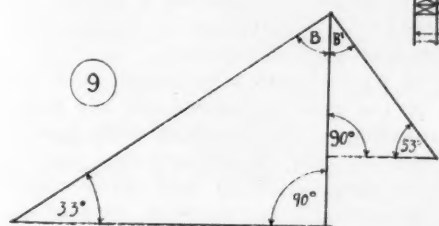
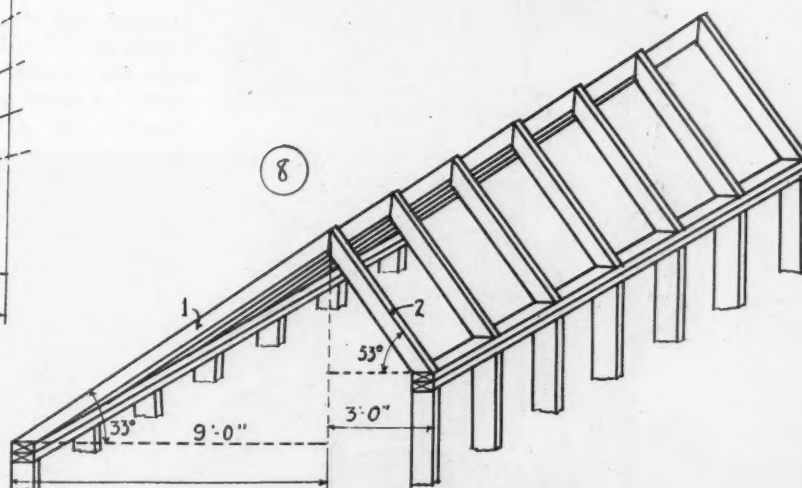
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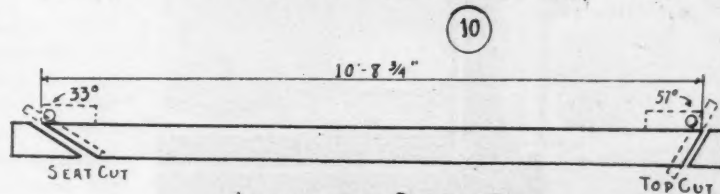
A RIGHT TRIANGLE

THE TRIANGLE
IN ROOF FRAMINGTHE DEGREE IS THE UNIT OF MEASURE
FOR ANGLESTHIS ANGLE IS
 $90 - 30 = 60^\circ$ 

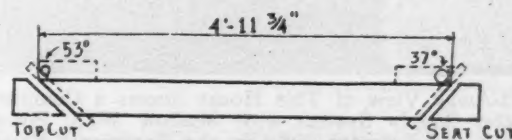
A PROTRACTOR

THE LENGTH PER FOOT OF BASE
CALLED "THE LENGTH PER FOOT RUN"ANGLE B IS $90 - 33 = 57^\circ$ ANGLE B' IS $90 - 53 = 37^\circ$ 

LENGTH PER FOOT RUN FOR $33^\circ = 1.1924'$
 LENGTH OF RAFTER #1 IS $1.1924 \times 9 = 10.728'$ OR $10'-8\frac{3}{4}"$
 LENGTH PER FOOT RUN FOR $53^\circ = 1.66'$
 LENGTH OF RAFTER #2 IS $1.66 \times 3 = 4.98'$ OR $4'-11\frac{3}{4}"$



LAYING OUT RAFTER #1



LAYING OUT RAFTER #2

Illustrating Some of the Principles Involved in Framing by Degrees.

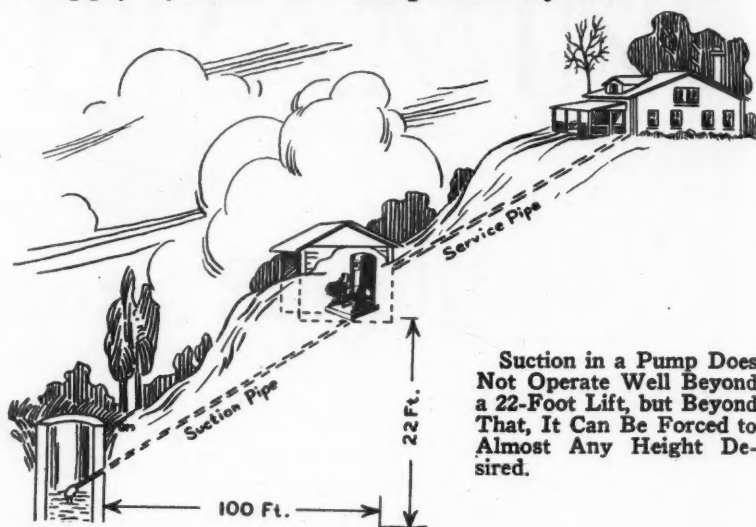
The Charm of Rural Life with City Conveniences

Made Possible By Private Water Supply Systems At Comparatively Low Cost

HIGH city rentals are only partially responsible for the great suburban building activity which is causing the suburbs to grow many times faster than the great cities. It is also due, in large part, to the desire for the ideal surroundings of a home—trees, shrubbery, flowers and the pure, clean air of the country.

With smooth concrete highways and rapid automobiles, there are many inducements for home builders to go out beyond city and village boundaries—beyond the reach of water mains, when they know how easy it is to install their own water supply systems at a comparatively low cost. An increasing number of farms are being equipped with water supply systems and modern conveniences each year. There are a number of ways of accomplishing this.

If there is no pure lake or stream within easy reach, a well may be sunk. The well may be shallow, deep, or driven, according to local conditions. If shallow, care should be taken that there is no



source of contamination close by.

Power to operate a water supply system may be secured by installing a gasoline engine if electrical power wires are not at hand or if it is not convenient or desirable to install a windmill. Even with hand operated pump, the water requirements of an average family can be supplied with comparatively little labor.

If the building site happens to be below the natural source of some good water supply, even the pump is not required. Or if a stream of pure water runs below the site, a ram can be installed and made to pump the water up to the house, on the principle of the larger volume of water outweighing the smaller.

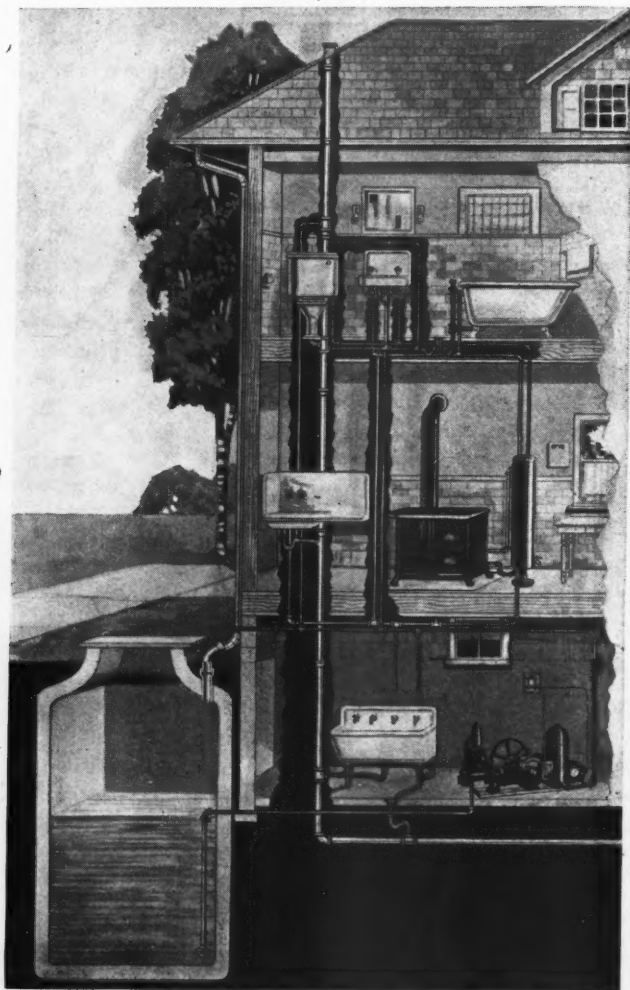
A tank in the basement and a pump connected with the water supply is all that is required to furnish water to any faucet in the house. However, there should be a gauge to show the level of the water in the tank and an automatic controlling device to start and stop the pump if electric power is used.

The compressed air in the tank will cause the water to rise through the pipes to the upper levels of the house. This method is preferable to installing a gravity tank in the attic. There is always danger of leakage from an attic tank, due to freezing in the winter.

When water is pumped into a pneumatic tank, the air which is first in the tank is compressed, the degree of pressure corresponding to the amount of water pumped in. The air is at the top and the water rising from below compresses it. A tank half filled with water creates an air pressure of about 15 pounds; two-thirds filled, 30 pounds; three-fourths filled, 40 pounds. Air pressure up to 75 pounds may be had but 30 to 40 pounds is ample.

When estimating the quantity of water which will be required per day, allow 25 gallons for each member of the household, seven gallons a day for each head of livestock and 108 gallons per day for each one-inch hydrant.

The electrically driven pump has many advantages for rural water supply, as it can be made fully automatic in its operation, so as to keep the water supply constant at all times. Another advantage is that the plumbing can be so arranged as to cause water to come to the faucet fresh from the well or other source without going through the tank. However, a pneumatic tank in the basement usually keeps the water supply fresh and cool.



The Cut-Away View of This House Shows a Complete Rural Water Supply System with Shallow Well, Power Pump, Tank and Laundry Tubs in the Basement; Range Boiler and Kitchen Sink on the First Floor and Bath Tub, Lavatory and Water Closet on the Second Floor.

Protect Interiors against Wind, Water, Dust with Andersen FRAMES

Drafty rooms, stained walls, dust-laden draperies and furniture speak loudly of faulty construction, for which the contractor is blamed.

Infiltration is most frequently caused by poorly made, improperly installed window and door frames. You don't *make* the frames, but you *do* install them.

You can protect your reputation and make sure of satisfied customers. Install Andersen Frames, accurately milled of the best lumber for the purpose, with patented features which make weather-tight installation easy and economical.

Andersen Frames for brick veneer were used in this Apartment Building at 51 So. McLean Blvd., Memphis, Tenn. Builder, Louis N. Ginsberg. Contractor, Joe Bloomfield.



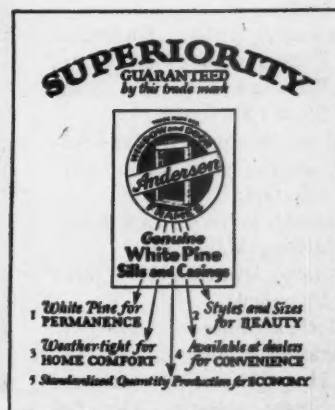
Why

Contractors use Andersen Frames

- (1) Patented, noiseless, long wearing *Andersen* pulleys used exclusively.
- (2) Genuine soft *White Pine* sills and casings—last a lifetime.
- (3) Patented, exclusive weather-tight features including groove for wide blind stop.
- (4) Absolute accuracy of milling.
- (5) A Frame up in 10 minutes.
- (6) *Standardized* styles and sizes, convertible for all architectural needs.
- (7) *Nationally* known and distributed.
- (8) *Dependable* because guaranteed by a reliable manufacturer.

Note these features of the Andersen Brick Veneer Frame: Pulley stile tongued into blind stop; rabbet to receive inside ground casing

Andersen details in SWEET'S and Home Builders Catalog



Andersen FRAMES ARE MANUFACTURED BY ANDERSEN LUMBER CO., BAYPORT, MINN.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The Wise Buyer Goes First to THE BASEMENT

That Cinderella of the Home and inspects its equipment & specialties

ONE of the outstanding developments of recent years in the merchandising of homes is the new importance of the basement. The builder who would make sure that his houses will appeal to the present day buyer will give serious consideration to the multitude of basement specialties which are available. The prospect who wants a home that is right all the way through assures himself that the important basement equipment is all it should be.

Twenty-five years ago the basement was a dark, dirty, often a damp place, where a heating plant might be hidden away and a pile of coal stored. Perhaps a corner might be equipped with makeshift shelving for canned fruit or contain some laundry tubs. All that is changed.

The up-to-date basement is a much used and seriously considered portion of the home. Heating plants have been improved, dirt eliminated or confined to a definite portion of the basement, light let in, walls decorated, elaborate laundry equipment installed, and one section partitioned off to serve as a workshop, recreation room or radio room. A glance at the following list of basement specialties demonstrates beyond doubt that basement equipment is a matter of first importance:

Laundry and Basement Specialties

Improved Basement Floorings: Quarry Tile, Color Mix, Composition, Stone, Dustless Hardened Concrete

Laundry Tubs: Enameled Pressed Steel, Slate, Enameled Iron, Soap Stone, Concrete

Water Heaters: Storage Automatic Gas, Instantaneous Gas, Steam Coil

Laundry Dryers, Gas, Electric Washing Machines

Rotary Ironers (In Closet Provided)

Clothes Chutes

Heating Plant:

Hot Water, Vacuum, Steam, Warm Air, Oil Burners, Gas Burners, Coal Stokers, Ash Receivers, Ash Hoists, Coal

Chutes, Oil Storage Tanks
Oil Gauges, Pipe Insulation, Furnace Fan Installations, Draft Regulators, Air Conditioners

Electric Panel, Basement Lighting Fixtures, Convenience Outlets
Garbage Incinerators
Ash Dump
Water Softeners

Water Systems

Brass Pipe

Cellar Drainers

Steel Basement Sash

Steel Shelving

Basement Workshop Equipment:

Bench, Vise Tools, Etc.

Recreation Room:

Gymnasium Equipment—

Billiards, Pool

While not every basement may contain all of this list of specialties, every basement must contain a large proportion of them to be considered modern. For example, everyone now realizes the importance of light and good ventilation; basement windows have been improved with this in mind and special basement windows provide more light and better ventilation. Dampness in basements often resulted in sickness, in former days. Now where a building site does

not have natural drainage cellar drainers are installed and the basement is kept perfectly drained and dry.

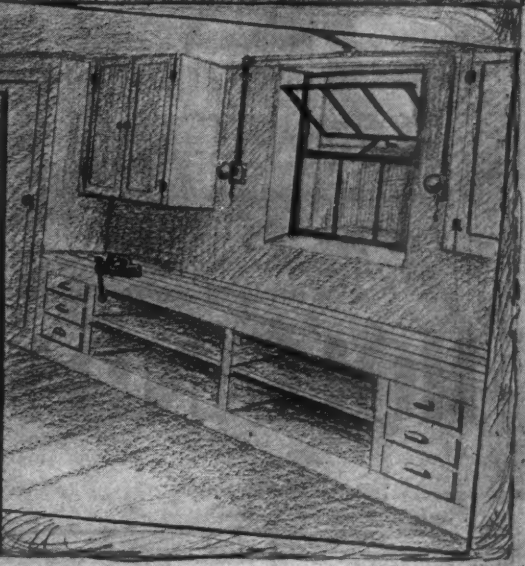
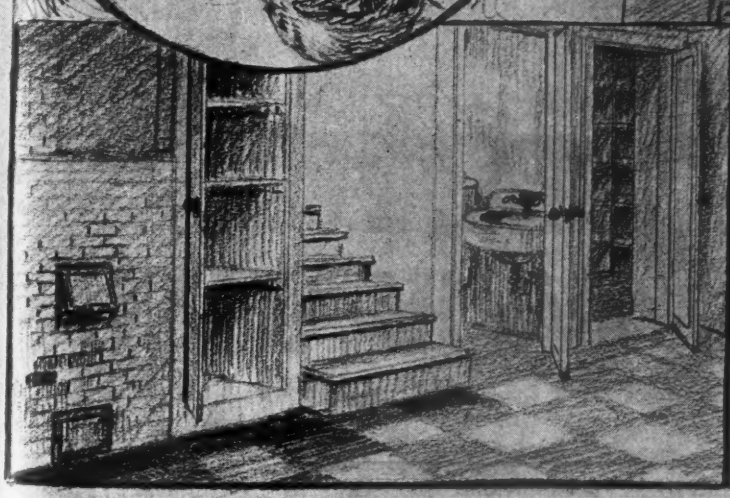
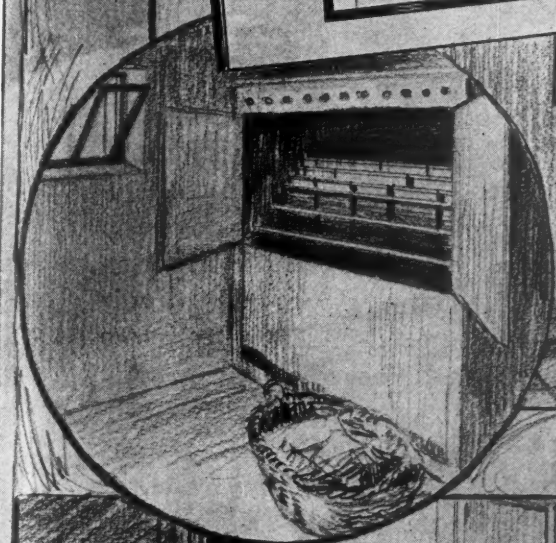
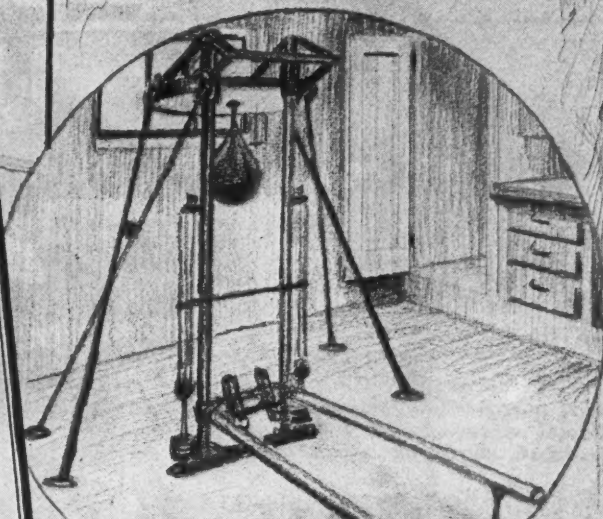
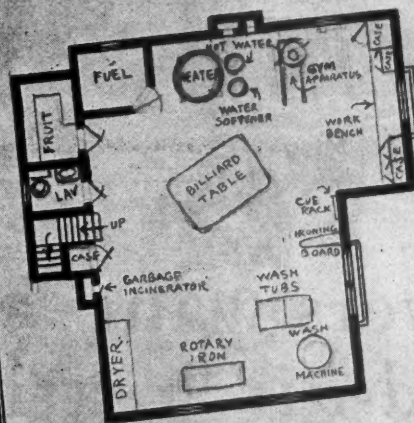
Every house should have a water heater and there are several types to choose from which assure a constant supply of hot water, at all times, sufficient to care for the needs of any number of people. In many of the suburban developments city water systems have not reached the location. Such suburban homes are equipped with water systems which pump and store the water and give a constant supply under pressure, equal to the city water supply.

The old fashioned garbage can, which disfigured the back yard and drew flies and stray dogs, is fast disappearing in favor of the incinerator, which is usually placed in the basement. Here it burns up garbage and waste of all kinds.



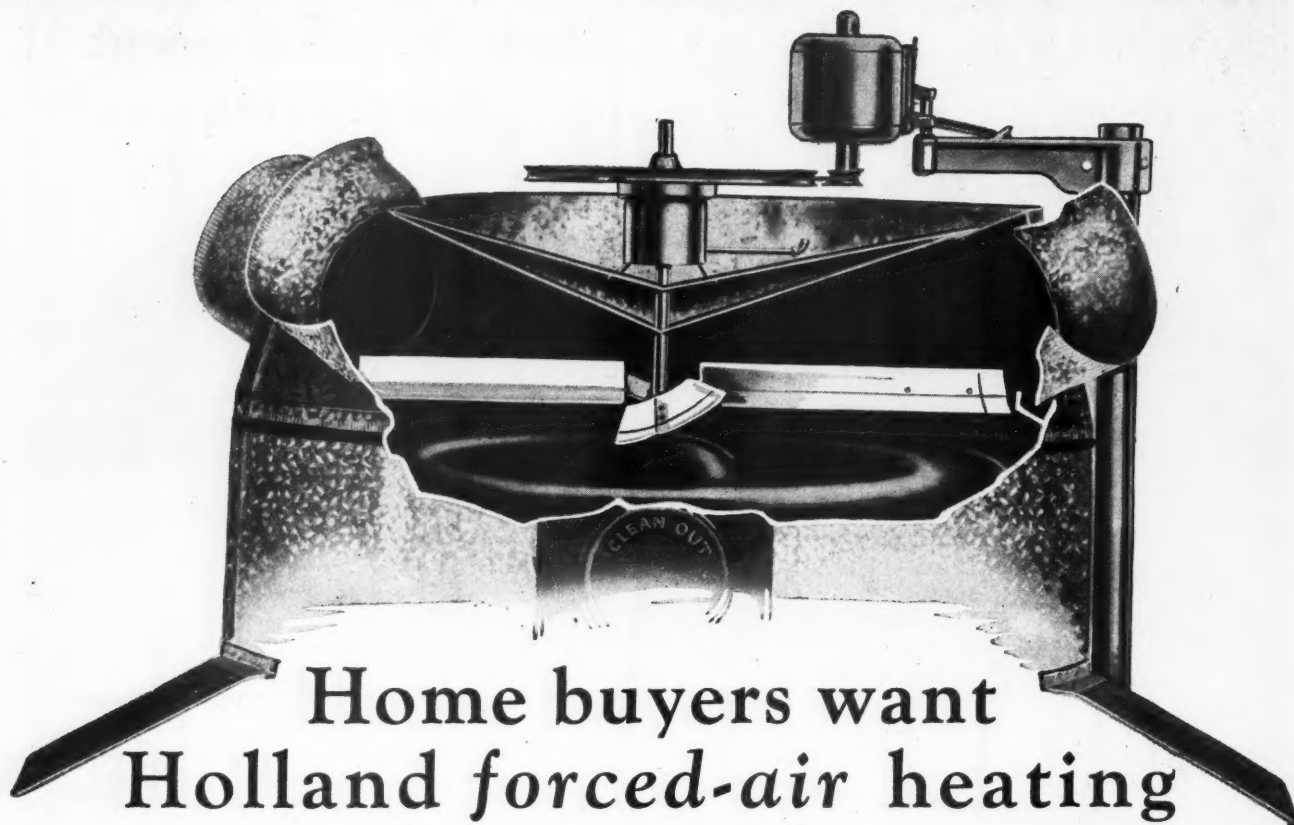
What a Contrast with the Basement of Former Days. Modern basement specialties have made the modern basement a place of many uses, even to a play room for the children.

Laundry & Basement Specialties



\$PECIALTIES for Quick Sales and PROFIT\$

HOLLAND FURNACES MAKE WARM FRIENDS



Home buyers want Holland forced-air heating

Holland forced-air heating is the permanent solution of the home heating problem. Home buyers everywhere know this—because the Holland is advertised from coast to coast. They want the comfort, satisfaction and economy that this system alone provides. Here's one of the greatest single sales factors a builder can use. It will help you reduce sales costs, increase profits and sell more homes. The modern Aire-U-Well system offers all the benefits of Holland Vaporaire Heating plus the added advantages of forced distri-



bution of warmth. A motor-driven airplane type propeller installed in the top of a Holland Vaporaire plant drives warmth in measured volumes to every room—regardless of location. You can positively guarantee heating comfort and satisfaction without assuming responsibility. Every Holland is installed under direct factory supervision and backed by an ironclad written guarantee that absolutely protects you and the home buyer. Get the facts. Have a Holland man call. Learn how Holland cooperates with builders and helps them sell more homes.

For address of nearest branch

look in your telephone book

HOLLAND *Vaporaire* HEATING

World's largest
installers of
home-heating
systems

HOLLAND FURNACE COMPANY, HOLLAND, MICHIGAN

Without obligation on my part, please

☐ Have a Holland man call

☐ Send me literature

Name _____ Address _____

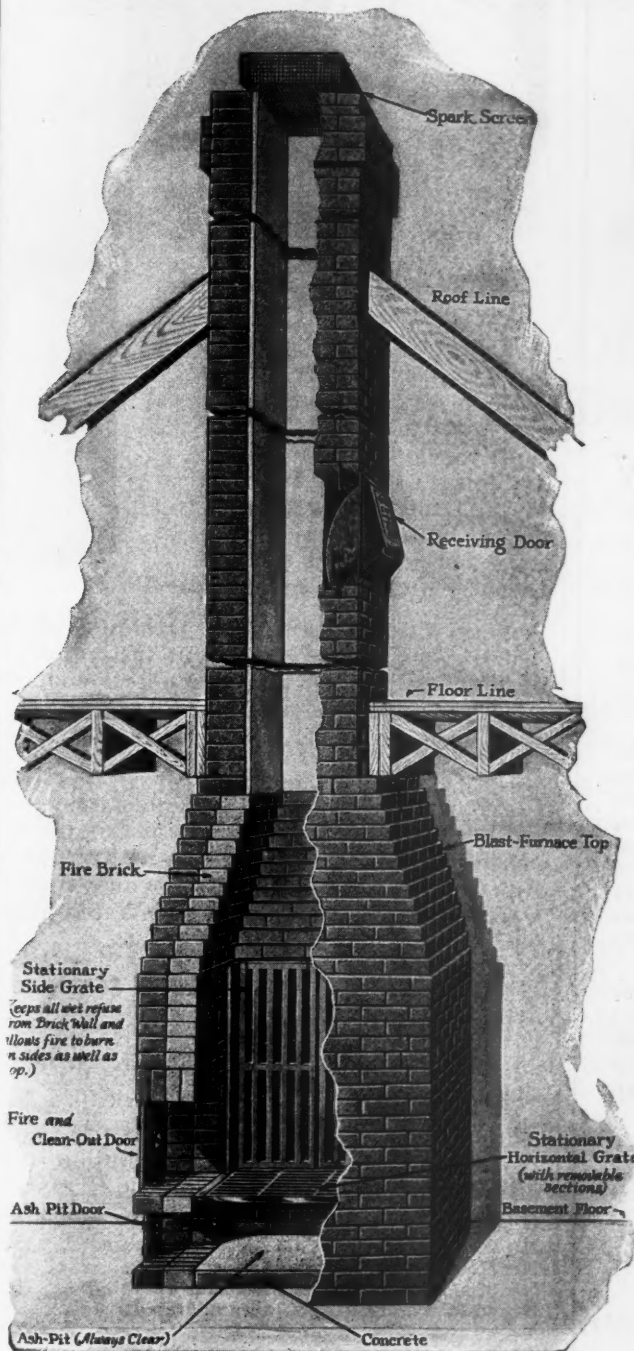
City _____ State _____ AB-1

525 direct
factory branches
and service
stations

SPECIALTIES for Quick Sales and PROFITS

K-M Incinerators

For Residences, Apartment Houses, Hotels



Pelham Biltmore Apartments, Pelham, New York, equipped thruout with K-M Incinerators. John R. Altieri Co., Contractors — Otto Kreitz, Architect.

Simple, Effective Incineration At a Low Cost

ARCHITECTS and builders everywhere are choosing K-M Incinerators because they perform efficiently yet are simple in design, simple to install, and "fool-proof" in their operation.

—an exclusive, patented suspended basket grate keeps refuse away from the brick side walls and permits combustion on all sides as well as at the top and interior of the mass.

—the special blast furnace construction of the chimney insures the maximum draft.

—the design is extremely simple, without nuts, bolts or shakers. The grates are stationary though removable.

—The K-M Incinerator costs less to buy and install and nothing to operate, since it burns waste for fuel.

Write for detailed specifications.

KELLOGG MANN & Co., Inc.

315 Grote Street,
Buffalo, N. Y.

KELLOGG MANN & CO., INC.
315 Grote Street,
Buffalo, N. Y.

Please send me complete details of your K-M Incinerator.

☐ I am a builder or ☐ I am a dealer

Name _____

Address _____

City & State _____

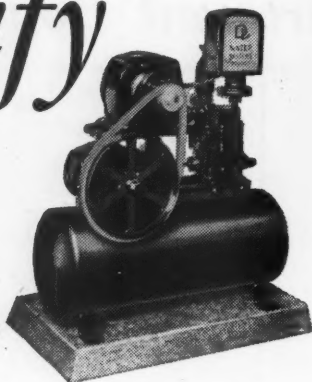
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The New **D** WATERBOY
"WATER BY WIRE"

Specify

D

Water
Systems



Only \$75
F.O.B. Dayton

MAIL THE COUPON NOW
for Details on the Full Line

GIVE as much attention to water systems . . . be just as particular in your choice of them . . . as you are about the heating plants for the houses you build. Specify **D** Water Systems in sub-letting plumbing contracts.

Here are residence water systems recognized as the best in the world and built according to General Motors strict standards of precision and value. Here are models for the largest or smallest houses . . . models for cisterns, wells, lakes and streams . . . models for every specification. And every **D** electric pump is dependable in service, economical in operation, surprisingly low in price. The new **D** Waterboy, providing full 225 gallons per hour with 5 gallon pressure tank, costs only \$75 complete.

Read the facts about **D** Water Systems. Find out why you'll make no mistake by including them in contracts with plumbers. Study the exclusive features of both deep and shallow well pumps. Send for free booklets on the complete line. Take a moment now and sign the coupon. Mail it at once . . . today.

DELCO-LIGHT COMPANY
Subsidiary of General Motors Corporation
Dept. R-120, Dayton, Ohio

D ELECTRIC
WATER
SYSTEMS
PRODUCTS OF GENERAL MOTORS

Also Manufacturers of Delco-Light Electric Plants

DELCO-LIGHT COMPANY
Dept. R-120, Dayton, Ohio

I'm interested in **D** Water Systems for houses I build. Send details on the complete line, without cost or obligation.

Name

Address

Give them the
BEST!



DAHLQUIST Anaconda Copper Boilers comprise a complete range of the finest hot water service units for home and industry. Dahlquist's great facilities permit the production of copper boilers in any size to meet any conditions encountered by architects or engineers.

Among the recent large Dahlquist industrial installations were five tremendous copper boilers of 1,000 gallons capacity each and containing a total of 30,000 lbs. of copper for the New York Life Insurance Bldg., New York City; Case Gilbert, Architect.

For household purposes Dahlquist makes an extensive line of copper range boilers with or without heating units, and available with the Dahlquist Aquatherm, a patented device which controls the water circulation and greatly increases the thermal efficiency of the boiler.

Dahlquist's latest achievement is the new Super-Aquatherm, patented, copper automatic storage unit, a completely insulated device, operated by gas or electricity and controlled by an automatic thermostat.

The new Super-Aquatherm is easy to install and is made in sizes to meet any condition, the three ordinary household sizes being:

No. 20 (Capacity 20 gals.)	Gas operated.....	\$100.00 List
No. 20 (Capacity 20 gals.)	Electric operated....	150.00 List
No. 30 (Capacity 30 gals.)	Gas operated.....	150.00 List
No. 30 (Capacity 30 gals.)	Electric operated....	200.00 List
No. 40 (Capacity 40 gals.)	Gas operated.....	200.00 List
No. 40 (Capacity 40 gals.)	Electric operated....	250.00 List

Prices of larger sizes on application.

Write for illustrated literature describing
Dahlquist products.

**Dahlquist Manufacturing
Company**

AMERICA'S LARGEST COPPER BOILER MAKERS

A, 2nd & West 3rd Streets
SOUTH BOSTON, MASS.

SPECIALTIES for Quick Sales and PROFITS

A typical basement installation utilizing the regular chimney. Can also be located at distance from chimney and piped to it.



Announcing the Basement-Fed KERNERATOR

REG. U.S. PAT. OFF.

GARBAGE and WASTE DISPOSAL for HOMES Already Built

FOR YEARS, the convenience and advantages of the Kernerator have generally been limited to *new* homes. Now we announce *two* types—the well known *Chimney-Fed* and the new *Basement-Fed*.

New buildings should still have the *Chimney-Fed* Kernerator, and should provide for a flue of suitable size. Nothing else can compare with the convenience of handy hopper doors on floors above, into which all waste—not only garbage, but tin cans, bottles, sweepings, old magazines, and the like—can be dropped as rapidly as it accumulates.

But there are thousands of homes already built and being built in which a suitable flue for the *CHIMNEY-FED* Kernerator was overlooked and where the *BASEMENT-FED* Kernerator can rid the premises of the dirty, filthy garbage can with its menace to health; and the fire hazardous basement rubbish pile.

For the *owners* of these residences, the ideal incinerator is the new *BASEMENT-FED* Kernerator, which becomes a permanent part of the building. The advantages over “gas-fired” incineration are many, and are listed at the right.

Lasts a Lifetime

Masonry won't rust or burn out and the *BASEMENT-FED* Kernerator will last as long as the building.

Less Attention

The large ashpit requires cleaning out only 3 or 4 times a year.

Larger Capacity

The combustion chamber of the smallest model for 5 or 6 room residences holds 6 bushels and accommodates not only garbage and combustible waste but all rubbish and non-combustibles like tin cans, bottles, etc., as well. Broken up wooden boxes, fibre cartons, etc. are deposited through the large fire door.

Less Expensive

The first cost is about equal to the portable gas-fired incinerator of about half the capacity. The savings in gas alone pay back the first cost of a Kernerator in a few years' time, and from then on pay dividends that mount up to a surprising total.

KERNER INCINERATOR COMPANY

753 East Water Street

Milwaukee, Wis.

Mail the coupon for complete information and prices. Or phone your local Kernerator representative. Offices in 89 cities.

KERNER INCINERATOR CO.,
753 E. Water St., Milwaukee, Wis.

Gentlemen: Please send me information on the Kernerator ☐ Basement-Fed type ☐ Chimney-Fed type
(Check which)

MODEL R
for Six Room
RESIDENCE

\$90

Masonry about
\$50
additional

Name _____

Address _____

Catching the Woman's Eye

With Specialties for

THE KITCHEN

The Workshop of the Home

SPECIALTIES for the kitchen are, perhaps, the most important specialties that the builder has to consider.

There is a reason for this. Experience has shown that the woman, more than the man, of the family is the deciding factor in the purchase of a home. Therefore, selling the woman is of primary importance and, since the kitchen is the workshop of the home, in which the housewife spends a large portion of her time and energy, she must be sold on the kitchen.

Families that are buying houses have usually been saving for the future home for a long time. They have formed very definite ideas as to what it shall be. The housewife, above everything else, is determined that her kitchen shall be a place that is attractive and cheerful, comfortable and convenient and equipped to reduce the household labor to the minimum. To satisfy those demands the kitchen must be right up to the minute in the specialties which it offers.

First of all, the floors must be good looking, but easily kept clean and resilient, to reduce the tiring effect of being constantly on one's feet. Then the walls must also be attractive in appearance and so colored as to aid the lighting. They, too, must be of such material and finish that they can be kept clean, for kitchen walls are likely to soil very quickly.

It would hardly seem necessary to mention such equipment as gas and electric ranges, built-in kitchen cabinets, sinks with special faucets and built-in ironing boards, for they are recognized necessities already. Less nearly universally in use, but equally important are dishwashing sinks, electric refrigerators, ventilating fans that keep the air free from smoke and fumes, and garbage incinerators which, when not placed in the basement, usually are installed in the kitchen for the convenient disposal of refuse. It is often found that a dumbwaiter is a valuable addition. This is especially true in apartment buildings where they

eliminate much needless stair climbing. Of course, convenience outlets and lighting fixtures must be ample, of the right type and properly placed. Convenience outlets are especially to be considered in connection with the breakfast nook. Of course there will be a breakfast nook, for what house is considered modern without one? And there are a number of excellent special table and seating outfits for equipping the breakfast nook.

One might go on discussing many other items at length, if space permitted, for these are only a few selected from a long list. Such a list might read about as follows:

Kitchen, Pantry and Dining Room Specialties

Gas Ranges, Electric Ranges

Oven Regulators

Dish-Washing Sinks

Laundry Sinks

Special Faucets

Kitchen Cabinets and Case Assemblies

Built-In Ironing Boards

Refrigerators, Outside Icing

Refrigerators, Electric or Gas

Milk and Package Receivers

Dumbwaiters

Ventilating Fans

Water Filters

Water Pumps and Supply Systems

Garbage Incinerators

Fold-Away Dinettes

Breakfast Nooks

Wall Tiling

Special Wall Finishes

Wall Coverings, Washable and Ornamental

Special Floorings:

Rubber, Linoleum, Cork Tile

Safety Rear Door

Combination Storm and Screen Door

Special Lighting Fixtures

Convenience Outlets

Door Bells and Buzzers and Transformers

Marble Window Sills

Telephone Cabinets

Nickel Stove Pipe

Double Acting Spring Hinges



The Breakfast Nook Is One of the Best Talking Points a Builder Can Put Into His Kitchens. Equipped with a special table and disappearing benches, as shown, such a nook requires little space.

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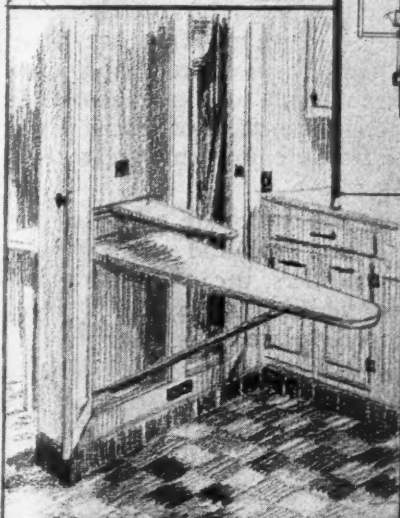
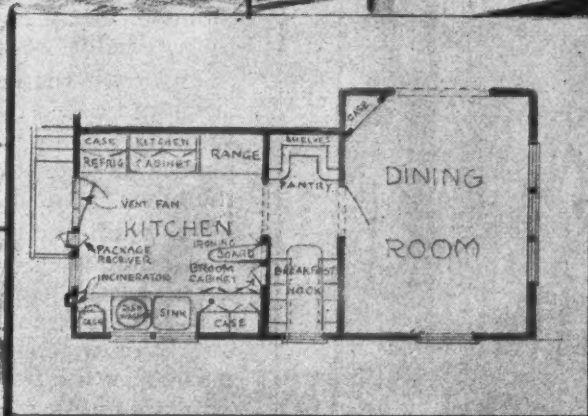
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Kitchen Pantry and Dining Room Specialties



Built-in Telephone Convenience

—a modern selling aid for Builders



TODAY'S standards of living demand better homes, and builders have been quick to see the value of added conveniences. Two-car garages, light and power everywhere, bathrooms on every floor—all have increased the living comfort of the family.

And with these modern aids to living has developed a new conception of telephone convenience—house-wide telephone service, telephones or telephone outlets in every part of the house—*built-in*.

The public's telephone habits are changing. The housewife now wants telephones here, there, everywhere—to save steps and allow her to talk from room to room, across the street, or to San Francisco or Paris! Every member of the family enjoys this greater telephone convenience.

Facilities for more adequate telephone service provide a practical and not expensive selling aid for builders, because home buyers are wanting the added comfort that plenty of telephones properly placed can give.

As an aid in planning for greater telephone comfort in modern homes, apartments and buildings, the Bell System has issued two booklets which contain valuable technical data, diagrams and suggestions of pertinent interest to builders. Copies may be had upon request to your nearest Business Office.

In addition, the Business Office will gladly furnish and install adequate telephone equipment in your sample house to illustrate how the conduit and outlet facilities you have *built in* can be utilized to meet whatever household telephone service the home buyer may desire.



SPECIALTIES for Quick Sales and PROFITS

"Diner-ette"

The folding-bench breakfast room set will

save 1/2 the floor Space!

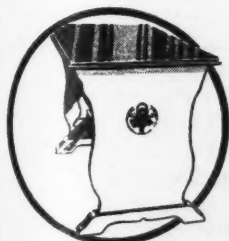
**All the Pastel
Shades in Life
Time Lacquer
Finish**



**Style, Beauty
and Decoration for Every
Breakfast
Room**



**One Bench
Folded Under**



**Both Benches
Folded Under**

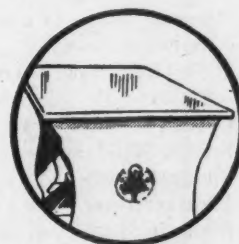
**Building Material Dealers are
Buying "DINER-ETTE" by the
carload. Get Our Dealer Proposition**

... ¶ Many model homes have proved that "Diner-ette" not only sells itself, but helps a quick sale of the home. . . . ¶ Several of the largest Building Developments in the United States, are using "Diner-ette" *exclusively*.

... ¶ With both benches open, "Diner-ette" covers 45"x52"; both benches closed, 26"x45". It will comfortably dine four people in a nook 5'x5'. High quality workmanship, material, construction and finish guaranteed. . . . ¶ Lowest priced space-saving breakfast room outfit on the market. Ships and handles as a unit. NO installation expense . . . ¶ Contractors are urged to write for illustrated literature . . . where there is no dealer in their districts.



**Optional 4-Way
Electric Socket**



**Optional
Porcelain Top
for Kitchen.**

"DINER-ETTE" MANUFACTURING CO.

Executive Offices: 5227 Loraine Street • DETROIT, MICH.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The SOCIAL STATUS of the Home is Helped by the Latest APPOINTMENTS and SPECIALTIES for the LIVING ROOM, LIBRARY and HALL

THE reception hall, living room and library are the rooms most frequently seen by visitors, and so are most frequently taken as an indication of the social status of the home. For this reason every home buyer pays particular attention to the appearance of these rooms. So, too, the manufacturers of specialties have paid particular attention to the development of specialties that will add to the attractiveness and convenience of these rooms. After the general plan of a house has been determined the builder will find a long list of items which he will do well to consider. In general here is how it will look:

Living Room, Library and Hall Specialties

Radiant Gas Heaters
Thermostat Heat Controls
Radiators
Radiator Cabinet Heaters
Radiator Furniture or Covers
Concealed Radiation
Special Radiator Valves
Warm Air Registers
Passenger Elevators and Lifts
Special Door Hardware
Special Floorings:
Hardwood Block, Parquetry, Ship Decking, Marble, Composition, Cork and Other Special Tiling
Floor Coverings
Drapery Fixtures,
Window Shades
Health-Glass Sun Room
Casement Adjusters
Special Windows
Special Screens
Weatherstrips
Stairs in Hardwood or Wrought Metal
Special Lighting Fixtures
Ornamental Switch Plates
Up-to-Date Switches
Special Wall Finishes
Radios and Radio Connections
Built-In Telephones

Open Fireplace Throat and Damper
Fireplace Fittings
Special Mantels
Book Cases and Shelves
Mail Boxes, Special and Built-In
Disappearing Stairs

Convenience Outlets

Special Quality Doors and Millwork

Inter-Communicating Tele-

phones

Burglar Catches for Windows and Doors

Clocks

Such a list convinces one that it is no longer a simple matter to plan a house as in the days when there was little choice of materials and few if any specialties to select. Just the question of floor materials and wall coverings demands much thought. There are wood floors, several kinds of wood, in strips and parquetry, there are various composition floors and there are floor coverings of more than one type, all popular and all appropriate when selected to harmonize with the whole design.

Walls may be rough or smooth plastered, painted or covered with paper or special wall covering materials, textured or smooth. The hardware must be in keeping with the style of finish and the fireplace with its modern throat and damper, and perhaps a special mantel, must fit into the picture, too. The same applies to the heating units, whether they be radiators or registers, concealed or not concealed, covered with radiator furniture or left exposed,

all are now made in patterns to harmonize with the architectural style and furnishings.

The truly modern home will be equipped with a mail box which is a different thing from the flimsy box of the past. It may be an ornamental box installed outside or it may be built into the wall so that the mail can be received in the hallway without the necessity of even opening the front door. The windows will, of course, be well weatherstripped to assure a warm home with economy of fuel.

The hallway will probably contain the telephone and this may be of the built-in type which most appropriately fits into this modern scheme.



The Modern Living Room, Hall or Library Requires the Application of a Surprising List of Specialties in Order That It May Meet the Standards of the Family It Represents.

LIVING ROOM, LIBRARY and HALL SPECIALTIES

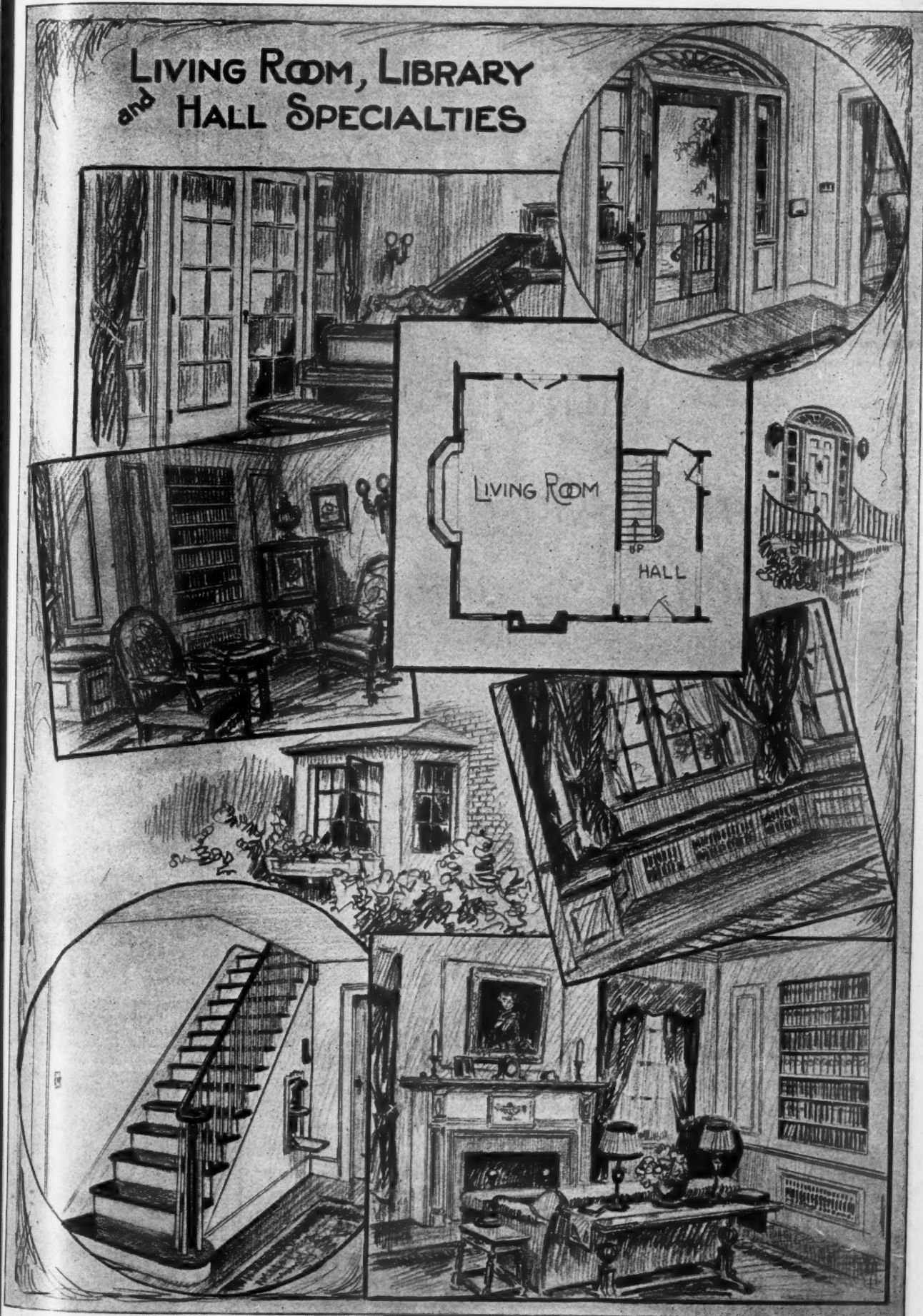
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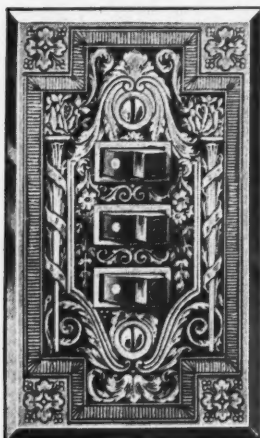
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H&H

UNIFIED Wiring Devices

for
*Single-Gang Simplicity,
Neatness and Economy*

Now, fewer wall-plates will mark the points where electric lights and appliances are controlled. *One* single-gang unit will take the place of two or three different wiring devices.

One single-gang plate will appear on the wall, instead of two or three singles—or a two or three-gang plate. How much neater than spreading them out! More inconspicuous; more pleasing to the eye.

And these H&H Unified Devices mean greater convenience to the user. Two devices in one—three devices in one—give *one* point of control for more than one circuit. It's easier to get at; handier to use.

Better utility-value; better decorative value. *Besides* the value of the new idea, in giving owners the latest suggestions for electrical service. We'll be glad to supply supplementary data to that below.

H & H UNIFIED Devices

Tumbler Switch No. 21096; 3 levers for 3-circuit control. See illustration in upper left corner. (Also furnished for 2-circuits, No. 21095).

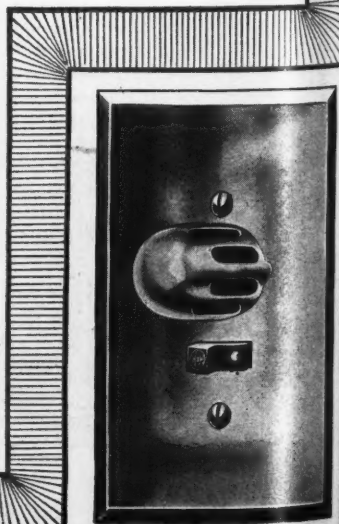
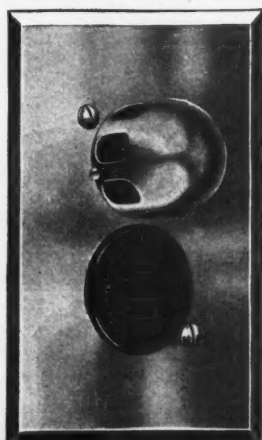
Switch and Receptacle Combination, No. 8998. Illustrated in upper right corner.

Receptacle and Warning Light, No. 1109. Illustrated in lower left corner. Lamp lights while plug is inserted and current is ON.

Switch and Warning Light, No. 1160. Illustrated in lower right corner. Lamp lights while switch is ON.

Send for new Catalogue "T" and see the latest in ALL needed Wiring Devices.

THE HART & HEGEMAN MFG. CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890



SPECIALTIES for Quick Sales and PROFITS

INFLUENCING A VAST MARKET FOR YOU

This full-page advertisement appears in *House and Garden* and *House Beautiful*.



OAK FLOORS ARE LIKE FINE OLD FURNITURE *time only serves to make them mellow*

Will the interior of your house be as attractive ten, twenty, fifty years from now as it is today? Will the home into which you are putting so much thought and care continue to express your personality?

Houses with floors of oak grow old gracefully. The rich, warm coloring, the grain, so full of character, the firm, enduring surface of the floors you love, will still beautify your home when decades have passed.

Oak floors are true heirlooms, for they never become out-of-date. This year the decorative fashion may call for scatter rugs. At another time it may be carpets. But the foundation of any good floor scheme is oak.

Oddly enough many people think of

oak floors as a luxury. Perhaps the reason is that for centuries oak floors have been associated with the finest residences. But the fact is that it costs only a trifle more to build a house with oak floors throughout than to build it with floors of softer wood.

Even if your home does not at present have oak floors upstairs and down, you can have them laid over the old floors at a surprisingly small expense. The cost of putting in oak flooring is actually less than that of buying temporary floor coverings. And you save definitely by eliminating the need of repairs. The work can be done room

by room in a few days, without inconvenience to you. Oak floors are an aid to better housekeeping. They are dustless, smooth and easy to keep clean. If you should ever wish to sell your house, or rent it, oak floors will add hundreds of dollars to the value of the property.

Let us send you literature about oak flooring—and help you with technical advice on any flooring problem.

This advertisement is published by the OAK FLOORING BUREAU, Builders' Building, Chicago . . . a non-profit bureau maintained by the oak flooring industry for the benefit of home owners and builders.

OAK FLOORS
are an
investment for
all time

**OAK FLOORING
BUREAU**
1238 Builders' Bldg.
Chicago, Ill.



STEADILY, month by month, the advertising of OAK FLOORING is reaching your customers—the great army of Americans who own their homes or expect to own them.

Houses with the added appeal of oak floors are always easier to sell—always command higher prices. There are bigger profits in homes that have oak floors throughout. And houses that do *not* have them offer the builder and lumber dealer a splendid market for new flooring installations.

The technical staff of the Oak Flooring Bureau is always ready to help you with information or advice on any flooring problem.

SPECIALTIES for Quick Sales and PROFITS



EACH YEAR'S
INCREASING SALES PROVE
AERO'S *popularity...*
...EACH YEAR'S SERVICE
PROVES **AERO'S**
dependable performance

Each year since the Aero Radiator was first introduced, sales have mounted by leaps and bounds. Each year the service given by these installations, in all sorts of buildings, in all parts of the United States, Canada, and foreign countries, has convincingly proved the fine

dependable performance of the complete Aero line.

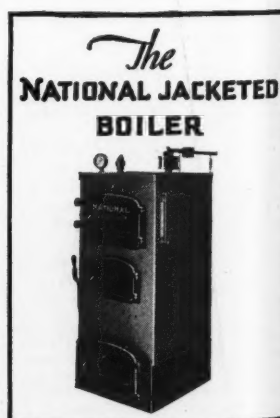
Aero's ever-growing popularity has led to many imitations. But none can show the record of proved performance on actual installations of every character, that stands as your best guarantee of Aero Radiator satisfaction.

NATIONAL RADIATOR CORPORATION

MANUFACTURER OF RADIATORS AND BOILERS

Nine plants devoted to National Service through these Branch Offices and Warehouses:

Baltimore, Md.—2600-2622 Matthews St.	Cleveland, Ohio—935 E. 63rd St.	Omaha, Neb.—108-112 S. Tenth St.
Boston, Mass.—93-97 Oliver St.	Indianapolis, Ind.—431 W. Georgia St.	Philadelphia, Pa.—121 N. Broad St.
Buffalo, N. Y.—259-265 Delaware Ave.	Johnstown, Pa.—221 Central Ave.	Pittsburgh, Pa.—1509 Arrott Bldg.
Chicago, Ill.—2445 N. Keeler Ave.	Milwaukee, Wis.—124-130 Jefferson St.	Richmond, Va.—3032 Norfolk St.
Cincinnati, Ohio—3530-36 Spring Grove Ave.	New York, N. Y.—55 W. 42nd St.	St. Louis, Mo.—1042 Central Industrial Ave.
	Washington, D. C.—2205 Fifth St., N. E.	



The National Jacketed Boiler has a trim, durable, dust-defying empire green jacket, that houses a dependable, efficient boiler. It burns hard or soft coal, coke, oil or gas. It is furnished for either steam, vapor, or hot water systems.

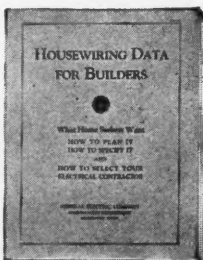


\$PECIALTIES for Quick Sales and PROFITS\$



Which house *will sell faster?*

Take two houses of identical construction. Wire one according to the standards of ten years ago. In the other install a General Electric Wiring System. Which house will sell faster?



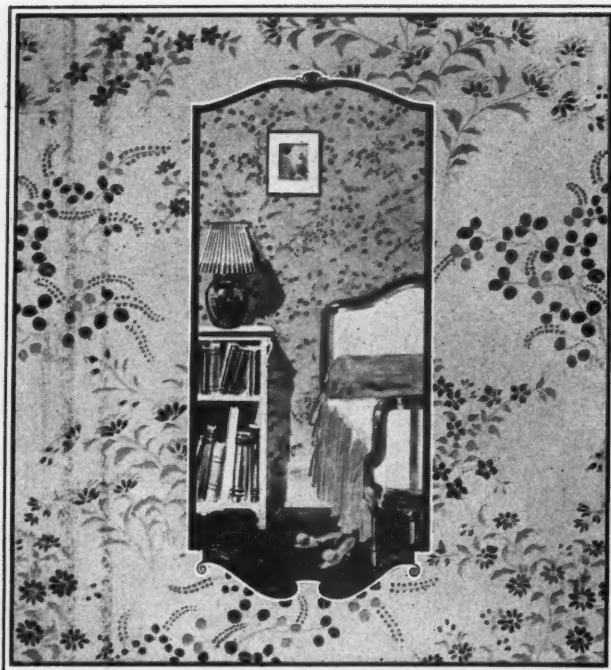
Write for your copy of a full-of-facts booklet to Section W-161 "Housewiring Data for Builders."

There's no doubt that adequate wiring has come to be one of those fundamentals for which every prospective buyer *instantly* looks. Are there enough outlets for comfort and for an elastic decorative scheme? Is there a switch accessible to every door? These two questions must be answered in the affirmative (as they are when you've installed a General Electric Wiring System) if you expect to put the "sold" sign out front in the shortest possible time.

GENERAL ELECTRIC WIRING SYSTEM

MERCHANDISE DEPARTMENT • GENERAL ELECTRIC COMPANY • BRIDGEPORT, CONNECTICUT

SPECIALTIES for Quick Sales and PROFITS



In the new year you need the new patterns and new values in WALL-TEX

FOR 1929, you can show your customers a greatly enlarged Wall-Tex line. Nearly twice as many numbers as last year. New, original designs. Flowered patterns. Modern figured patterns. Conventional designs in the popular pastel tints. Nearly every one in several different color combinations. The beauty of the new line will please your most critical customers.

Wall-Tex embodies the newest ideas of economy for home decoration. It is practical. The sun can shine on it, but it won't fade. Spots, furniture scars, finger marks can't disfigure it permanently. For, if it becomes soiled, it can be wiped clean with a damp cloth.

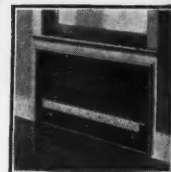
Another thing. Because it is a strong flexible fabric, Wall-Tex hides cracks in old plaster, and helps prevent new plaster from cracking. Nothing can equal it for use on ceilings, where the tiniest cracks are always noticed. In every decorating job, there are some rooms where nothing else can give satisfaction equal to Wall-Tex. Architects, builders, decorators should write for full information and prices. The 1929 sample book is ready for dealers. The Columbus-Union Oil Cloth Co., Columbus, Ohio.

WALL-TEX
PERMANENT
WALL COVERING

EVERY IMPROVEMENT BRINGS CONCEALED HEATING CLOSER TO UNIVERSAL POPULARITY



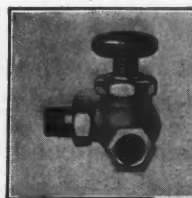
... and the Trane Under-Window Concealed Heater is the biggest improvement of all!



It is the Trane policy to collect every available fact on the experience of heating men with Trane products and then to act promptly on these suggestions through the Trane engineering laboratory. That is why the latest Trane Under-Window Concealed Heater embodies a solution of every important question raised during the early years of success with this equipment, and assures the future development of this revolutionary heating method under Trane leadership.

You wanted a complete unit, with nothing extra to buy. Here it is! Here is a one-man job of installation! You were wary of walling up a heating unit where you couldn't reach it. Here is complete accessibility at the turn of a few screws. And yet the needed wall space is a foot shorter.

The high reputation of Trane Traps and Valves and other heating specialties is built on the same solid foundation. From the development of the Trane Thermostatic Bellows, the best-known feature of Trane specialties, to the designing of the latest Heavy Duty Trap, the Trane organization has set the pace in every branch of heating covered by any of its products. In buying or recommending any part of a heating system except the boiler and piping, it will pay you to find out first what Trane has done recently in this particular field.



THE TRANE CO., Dept. 1
276 Cameron Avenue
La Crosse Wisconsin

HEAT TRANE CONCEALED
CABINETS TRANE HEATERS
PUMPS, UNIT HEATERS, AND HEATING SPECIALTIES

SPECIALTIES for Quick Sales and PROFITS

CROMAR *helps you*
to get bad weather re-laying jobs which you
could never land with hand-finished flooring



YOU nail CROMAR strips right over the old floors and you're finished. Two carpenters completely re-floor a room in a day.

Figure the extra profit you make on your men. Figure the extra jobs you can handle. And naturally there's no need to sublet a CROMAR job.

Nailing. That's all there is to do when you lay CROMAR. Because at the CROMAR factory every CROMAR strip of medium-textured Appalachian White Oak is scraped, sanded, filled, twice varnished—and then treated to resist moisture. All those operations which upset a customer's home for 10 days or more when you use hand-finished flooring, are done by CROMAR Machines before the strips leave the CROMAR factory.

Those strips reach the job CRATED — not merely bundled. You'll find the nail-holes punched in the tongue. It is this same, ingenious, V-shaped tongue (and groove) which gives a *flexible* joint and thereby insures a level top-floor.

A CROMAR floor is as pretty a job as you've ever seen. The finish will long outlast any hand-finish, because those remarkable CROMAR finishing machines are far more powerful and more uniform in their work than the best-skilled human hand.



Write for free samples and complete literature concerning the manufacture, the selling and laying of the only Factory Finished hardwood flooring in the world.

THE CROMAR COMPANY, WILLIAMSPORT, PA.

THE C. L. THOMPSON COMPANY

Pacific Greater West Distributor

Office and Warehouse: 200 Davis St., San Francisco, Cal.

CROMAR
FACTORY FINISHED
Oak FLOORING

EQUIPMENT *and* SPECIALTIES for BED-ROOM *and* BATH

Have Strong Sales Appeal for the Homeseeker of today

WHO wouldn't like to have a bath room like the one pictured at the bottom of this page? The modern bath room has received a tremendous amount of attention from the manufacturers of specialties because the modern bath room is one of those luxuries which appeal to everyone and have come to rank as actual necessities with most of us. And so equipment and specialties for bed room and bath room are being offered in great number and variety.

The wide awake merchant builder studies these offerings carefully and then selects equipment which he knows will be a strong sales factor in disposing of his houses to the best advantage. The bath room is first considered as a whole, a color scheme and style are selected, for today style is just as important in bath room equipment as it is in clothing.

The floor and walls are, most often, covered with tile, which is now available in a number of forms and at varying price ranges. The tiling, in pastel colors, is the background of the whole scheme of decoration and equipment. Many of the fixtures are made in the same materials and are built into the wall of the room. The larger fixtures are available also in harmonizing colors, tubs, lavatories, closets, medicine cabinets and mirrors. The metal work is all designed to be artistic as well as practical.

Very often, with the tendency toward more bath rooms in each house, and sometimes even a separate bath for each bed room, the bath room and bed room are designed to harmonize. In this case specialties for both rooms are considered together and with the products available today this can be done quite effectively. In addition to the equipment already mentioned there are many other items and a general list of them should serve as a reminder to the builder of the things he must

check in planning his homes. Such a list includes:

Bathroom and Bed Room Specialties

Plumbing Fixtures in Colors
Special Tubs
Tub Showers
Special Shower Curtains
Shower Stalls
Chromium Plated Accessories
Flush Valves
Improved Toilet Seats
Medicine Cabinets and Mirrors
Floor Tiling
Wall Tiling
Bath Room Accessories (Towel Bars, Soap Holders, Etc.)
Space Saving, Folding and Roller Beds
Efficiency Wardrobes:
Telescoping Hangers, Special Racks, Etc.
Cedar Lined Closets
Cedar Plasters.
Radiant Gas Heaters
Electric Heaters, Built-In, Convenience Outlets
Mirror Doors
Wall Safes

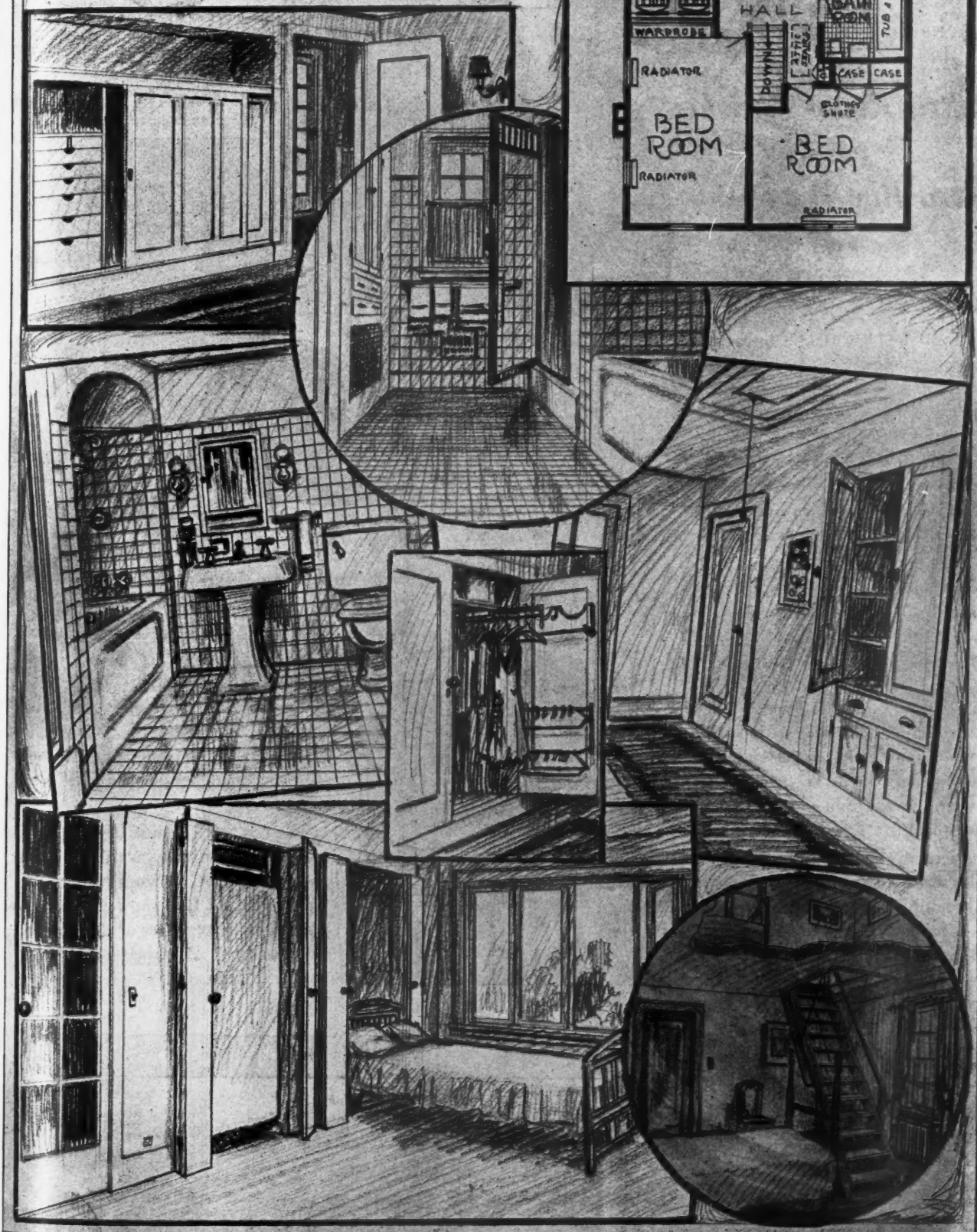
Moth Proof Steel
Vaults
Special Lighting Fix-
tures
Skylights
Scales
Window Ventilators

From such a list the builder can easily select a list of special equipment for bed rooms and bath rooms which will serve as valuable sales aids in presenting his houses to prospective home owners. Each item will furnish one more talking point, one more thing to make the house more desirable in the eyes of prospect and, which is even more important, in the eyes of the prospect's wife.



The Homeseeker Is Strongly Influenced in His Decision by the Bath Room Appointments. Here luxury is rapidly becoming a necessity and bath room specialties cannot be too strongly emphasized by the progressive builder.

Bathroom and Bedroom Specialties



\$PECIALTIES for Quick Sales and PROFITS\$

You Can Sell Houses

Faster

with an

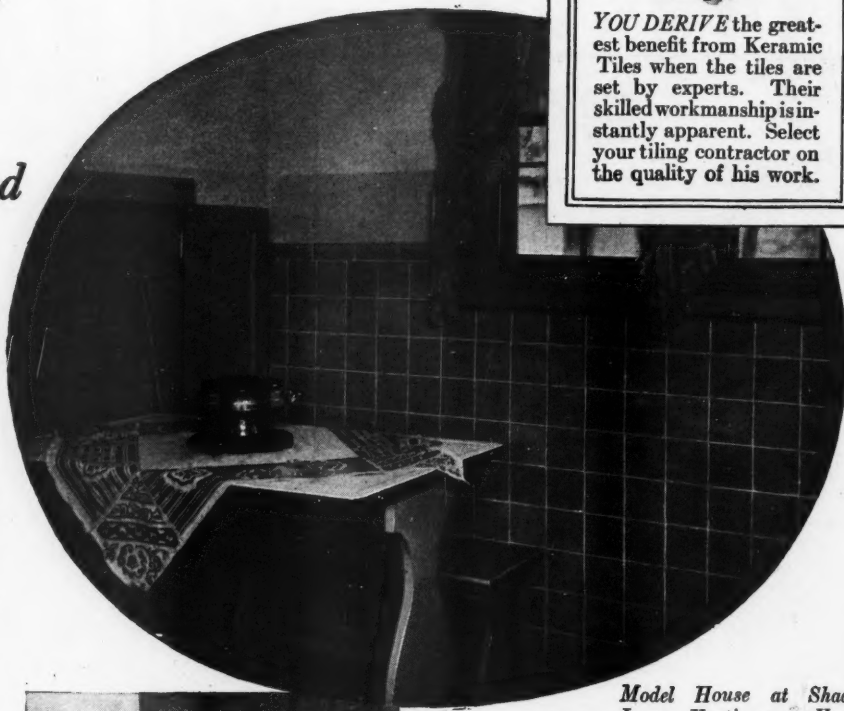
Extra Room Finished

in this

Attractive Way . .



YOU DERIVE the greatest benefit from Ceramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.



TILED BATHROOMS—once such a big selling point—are now an essential requirement of home buyers. Today, it's the house with an *extra* room finished in Ceramic Tiles—kitchen, dining room, sun porch—that definitely attracts the desirable buyer, speeds his decision to buy, brings you bigger and quicker profits.

The interiors shown above are parts of a dwelling designed by the Homeland Company and awarded the *Good Housekeeping* First Prize for Model Homes. Floors and high wainscots of Ceramic Tiles make the bathroom as charming as it is practical. Completely water-tight and water-proof, it is a place where bathers, young and old, can paddle and splash to their heart's content.

Then in the kitchen, Ceramic Tiles serve a *dual* purpose. They not only supply sanitary, easily cleaned walls for the kitchen but their beautiful color makes a charming setting for the morning meal in a breakfast



Model House at Shado
Lawn, Hastings-on-Hud-
son, N. Y., Homeland Co.,
Architects

nook that escapes the "kitcheny" atmosphere entirely.

There are endless ways that Ceramic Tiles—real tiles—contribute to the attractiveness and saleability of houses. In entrance halls, corridors, sun porches, libraries—Ceramic Tiles can profitably be used to bring you higher prices and quicker sales.

The cost of Ceramic Tiles is little more than ordinary wall and floor materials. Call in your tiling contractor . . . let him show you colors, patterns and textures of this beautiful building material before you complete plans on your next job.

K E R A M I C T I L E S

ASSOCIATED TILE MANUFACTURERS, 420 Lexington Avenue, New York, N. Y.

ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., Ltd.
CAMBRIDGE TILE MANUFACTURING CO.
FEDERAL TILE COMPANY
FRANKLIN POTTERY
GRUEBY FAIENCE & TILE CO.

MATAWAN TILE CO.
THE MOSAIC TILE CO.
NATIONAL TILE CO.
OLEAN TILE CO.
THE C. PARDEE WORKS
ROSSMAN CORPORATION

STANDARD TILE CO.
THE SPARTA CERAMIC CO.
UNITED STATES ENCAUSTIC TILE WORKS
UNITED STATES QUARRY TILE CO.
WHEATLEY TILE & POTTERY CO.
WHEELING TILE CO.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

\$PECIALTIES for Quick Sales and PROFITS

A Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware

Its Advantages: A Seat, Foot, Shower and Child's Bath, all in one.
Comfortable because the bather assumes a sitting position.

Easy operation of valves.

No grip rails needed.

Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details and Testimonials

LOUIS G. DITTOE
ARCHITECT
1106-7 INSHALL BUILDING
CINCINNATI, OHIO

Cincinnati, Ohio.
December 5, 1922.

Wheeling Sanitary Mfg. Co.,
315 Wrigley Building,
Chicago, Illinois.

Attention Mr. F. W. Wheelock.

Gentlemen:

I wish to take occasion to compliment you upon your new combination shower and bath tub fixture, sixty-eight of which I recently had installed in the new St. James efficiency apartments in this city, and fifty-nine in the Auburn Apartments in this city.

While these buildings have been completed for occupancy but a few months they are substantially 100% occupied, which success, I believe, is due largely to these plumbing installations, as practically all the tenants express themselves as being much pleased with this feature.

Considering the satisfaction that these installations are giving, I have just contracted for eighteen similar installations for the new Alms Apartments at Ft. Mitchell, Kentucky, making all of these jobs 100% Wheeling Sanitary Mfg. Co.'s installation.

Yours very truly,

Louis G. Dittoe
Architect.

LGD:VF



PLATE 11-E
Enameled Iron Ware, 44x30 inches to tile in right or left hand corner. Enameled white all exposed parts. Same as Plate 10-E except for corner installation.



PLATE 10-E
Enameled Iron Ware, 44x30 inches to tile in recess, only. Enameled white front. Waste in foot section either right or left hand end.

100%
Wheeling Sanitary Mfg. Co.'s Installations



Plate 126-E "The Tranquill" all white Siphon Jet Water Closet Combination.

We manufacture a complete line of Plumbing Fixtures of Vitreous China, Enameled Iron, Semi-Vitreous Porcelain, comprising Water Closet Bowls and Flush Tanks, Lavatories, Regular Bath Tubs, Kitchen Sinks, Laundry Trays, Urinal Stalls, etc.

WHEELING SANITARY MFG. CO.
WHEELING, W. VA.

Manufacturers of High Grade Plumbing Fixtures

Sold by Leading Jobbers of Plumbing Supplies

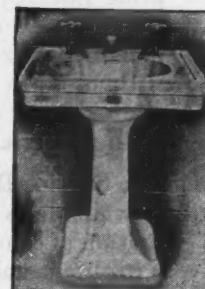
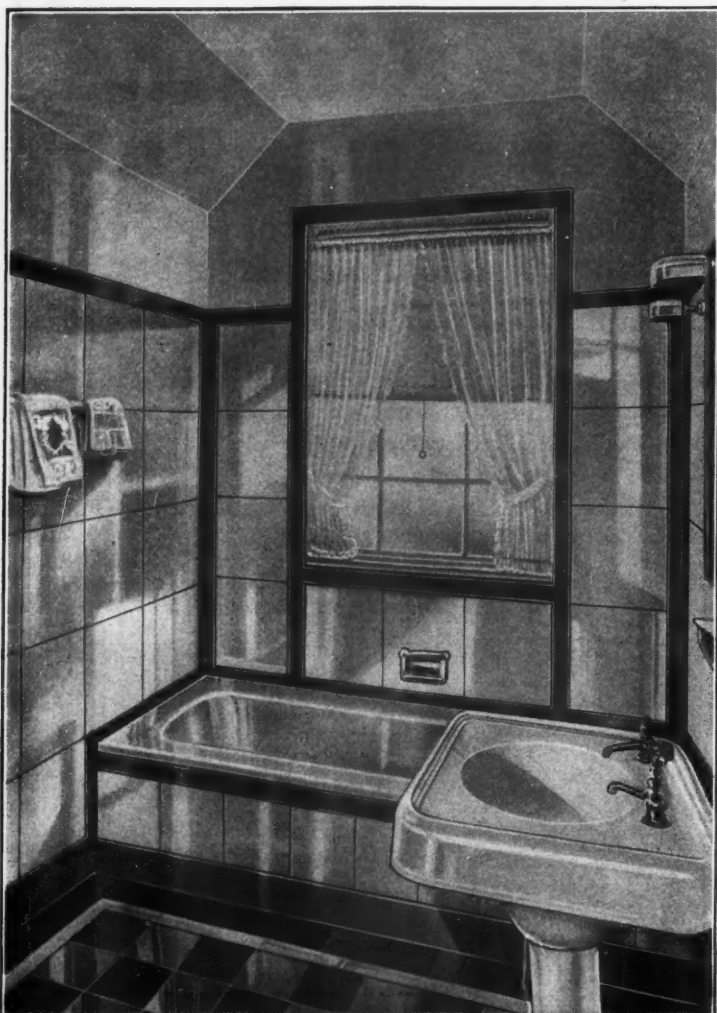


Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

SPECIALTIES for Quick Sales and PROFITS



For Every Type of Home

VITROLITE

Because of its great beauty and superior qualities, many have the impression that Vitrolite walls are too expensive for the average home. Not so! Vitrolite is adaptable to any plan from the simplest to the most elaborate. Whether you are designing cottage or mansion, Vitrolite will create bathrooms and kitchens that one loves to live with, to enjoy and to use.

As it is practically without limit in color, decorative and texture possibilities, selections may be made to harmonize perfectly with any decorative plan and with the handsome and colorful plumbing fixtures now so much the fashion.

Simple arrangements for the more modest home or apartment may be selected, which for attractiveness cannot be equalled by any other material.

VITROLITE

The Superlative Surfacing Material

Vitrolite in any treatment is a source of genuine pride not alone because of its great beauty, but because it is everlastingly clean and sanitary. Its fire-polished surface withstands scratches and stains. It will not craze or deteriorate in any way. A damp cloth keeps it immaculate. It is the superlative surfacing material.

The Service Department of the Vitrolite Company is available to Architects and Builders for the preparation of color sketches and for technical details of Vitrolite installations.

THE VITROLITE COMPANY

120 South La Salle Street, Chicago

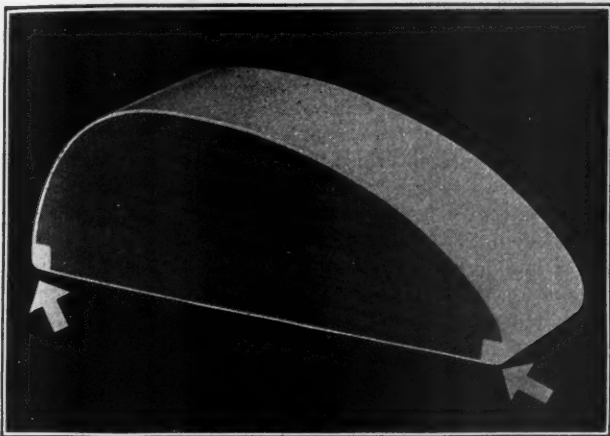
SALES REPRESENTATIVES

Atlanta Baltimore Boston Brooklyn Buffalo Cincinnati Cleveland
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SPECIALTIES for Quick Sales and PROFITS

You Should Have Brunswick's Catalog... Showing the Complete Line of Brunswick Closet Seats



Re-inforced
cushion edge
of Brunswick
White Seat

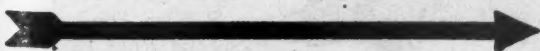
BRUNSWICK'S Seat line is now complete . . . no matter what type of closet seat you want, you will find it in Brunswick's new catalog. Write for your copy of this catalog now. Use the convenient coupon.

There are construction features in Brunswick Closet Seats too important to be overlooked. Brunswick Sheet Covered Seats (in white and in colors) have the exclusive re-inforced cushion edge. Instead of merely joining the two sheets of pyralin by butting or overlapping, as has been the custom, Brunswick in this new-type seat welds the sheets of pyralin to a cushion of the same material. The result is that the outer seat edge has pyralin 9 times the thickness of a single sheet right where danger of damage is greatest.

No other white sheet-covered seat offers you this unique feature. It enables us to guarantee this edge against defects for an unlimited period.

Brunswick Whale-bone-ite, likewise, has construction features that make this the most durably constructed seat on the market. Our catalog gives you all details of all models. Place no order for closet seats of any kind before you get this catalog showing the Brunswick line.

**JUST FILL IN, CLIP
AND MAIL THE
COUPON TODAY**



Box 337, Seat Department,
The Brunswick-Balke-Collender Co.
623 So. Wabash Ave., Chicago

Send your complete catalog, showing all models of Brunswick
Whale-bone-ite, White and Wood Seats.

Name.....

Street.....

City..... State.....

THE BRUNSWICK-BALKE COLLENDER CO., 623 S. Wabash Ave., Chicago

CONSTRUCTION MATERIALS

of Quality

for the INTERIOR

Appeal to the Discriminating Buyer

QUALITY in any building must start with the construction materials. No matter what fine finish and equipment may be added later a building cannot have quality unless quality construction materials are used all the way through. Some of these materials are plainly visible to the discriminating buyers, others are hidden; but, if the discriminating buyer is also a knowing buyer, he will make very sure of them before he buys. It will pay the builder, every time, to make sure that the construction specialties that go into his house will make the right appeal to such a buyer, that they will help him to clinch the sale.

It has been mentioned that many of these materials are not visible to casual inspection, but they can be demonstrated in a way to satisfy the most critical prospect. Steel joists and trusses, steel bridging, concrete reinforcing and inserts, metal lath and special plaster bases, special and rust-proof nails, insulating materials such as fiber boards and blankets, dry fills and special building papers, acoustical and sound deadening materials, permanent plumbing of brass pipe, may never be seen by the purchaser of a house, but what a difference they can make to him!

Yes, these things mean rigid construction and elimination of cracking plaster, warm rooms with fuel economy in winter and cool rooms in summer, quiet when noises from other rooms might disturb, dependable water supply and freedom from expensive plumbing repairs, and a multitude of other comforts and economies. The discriminating buyer will most certainly check up to see if these specialties have been used. If they have, a long step will have been made toward selling him the house.

Then, too, there are other materials which this same discriminating buyer can check quite easily and you may be sure that none of them will be missed in the buying inspection. The right kind of doors and trim puts the finishing touch to interior construction. Certainly it will not be overlooked. Wall coverings are too conspicuous to be passed by, in even the most careless inspection. Special stuccos and plasters, composition materials and coverings of all kinds are available to fit into every room, for every purpose, and a careful selection of wall covering will pay a

dividend on the time it requires.

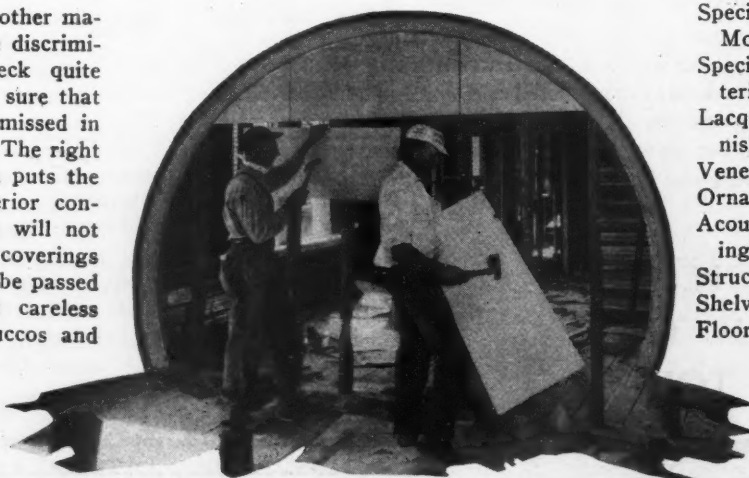
And there are all those smaller accessories which can make so much difference in a house, depending on whether they are right or wrong. Window equipment is important, proper balances or holders, sash cord or chain and quiet non-sticking pulleys must be provided. There are other items of builders' hardware for casement windows, for doors and for all those built-in cupboards and features that are so popular today, they can do much to make for convenience and for attractive finish to an interior.

A multitude of electrical wiring specialties are on the market. Every year the manufacturers are developing new and better electric appliances and the wise builder will see to it that his houses are completely wired.

All the items mentioned are included in the list which follows and others, equally important, have been added:

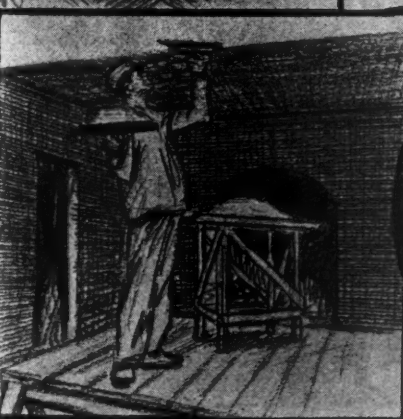
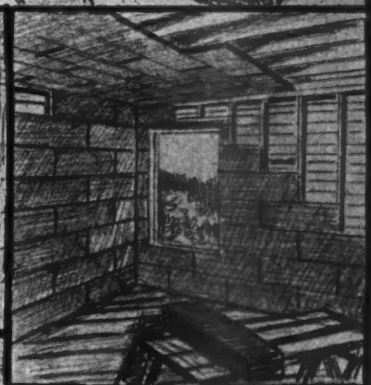
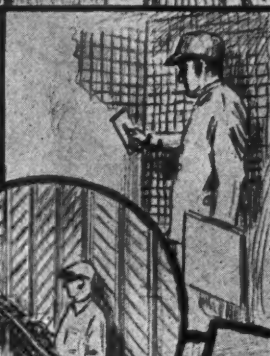
Specialties of Construction—Interior

Steel Floor Joists	Wallboards
Steel Bridging	Wood Trim
Trusses	Metal Trim
Insulation Materials:	Metal Ceilings and Walls
Fiber Boards, Fiber Blankets, Dry Fills, Special Building Papers	Sash Balances, Holders, Weights, Sash Cord and Chain, Pulleys
Special and Rust-Proof Nails	Doors
Special Plastering Bases	Electric Wiring Specialties
Metal Lath	Brass Pipe
Concrete Reinforcing	Special Door Locks
Concrete Inserts	Casement Hardware
	Plastic Paints
	Special Stuccos and Plasters, Mortar Colors
	Special Wall Coverings and Materials
	Lacquers, Enamels, Stains, Varnishes and Special Paints
	Veneer Panels
	Ornamental Plaster
	Acoustical and Sound Deadening Materials
	Structural Slate
	Shelving Brackets
	Floor Materials:
	Wood, Strip, Block and Parquetry, Tile, Linoleum, Cork, Tile, Rubber Tile
	Special Roof Construction Systems
	Lighting Fixtures
	Builders' Hardware



Insulation Is One Detail of Building That Has Intrigued the Interest of the General Public. Here we see a fibre board insulator being applied as a plaster base.

A circular illustration showing the interior of a stone building. The ceiling is a complex, dark, vaulted structure with many beams. The walls are made of rough-hewn stone blocks. In the center, there is a large, arched opening, possibly a doorway or a niche. To the left, there is a smaller, triangular opening. The overall style is that of a woodcut or a simple line drawing.





*"Now we know what real winter comfort is—
—and what a difference in the fuel bills!"*

THIS is the testimony of many an owner whose house is made weather-tight with INSULITE. The home insulated with INSULITE is appreciated every wintry day, no matter how fierce the storms may be. Every room in the house comfortable—and easily kept so, with much less fuel consumed.

Summer comfort is just as certain. INSULITE serves well all year—assuring protection against winter cold, summer heat and dampness, and

serving also as a sound deadener. As sheathing—plaster base—wall board—roof insulation—attic lining—and other uses—INSULITE is a barrier against the elements, and a source of fuel economy.

Houses insulated with INSULITE are more readily sold. Such construction is a great talking point. Write for samples and descriptive booklets. Let our engineering department help you.

THE INSULITE COMPANY

1202 Builders Exchange, Dept. No. 5

Minneapolis, Minnesota

INSULITE

the Wood-Fiber Insulating Board

\$PECIALTIES for Quick Sales and PROFITS\$

TRUSCON

World's Largest Manufacturers of Permanent Building Products



STEEL WINDOW PRODUCTS

PIVOTED—
CONTINUOUS—
DOUBLE-HUNG—
DONOVAN AWNING TYPE—
COUNTERBALANCED—
AND PROJECTED WINDOWS
MECHANICAL OPERATORS
STEEL CASEMENTS
BASEMENT WINDOWS
STEEL FRAMES
STEEL LINTELS
STEEL DOORS
SWING AND SLIDE
VERTICAL FOLDING
VERTICAL LIFT
VERTICAL LIFT-SWING
FIRE DEPARTMENT
AIRPLANE HANGAR
COMPLETE BUILDING UNITS
FLAT ROOF TYPES
PITCHED ROOF TYPES
HANGARS
STRUCTURAL STEEL
STEELDECK ROOFS
FERRODECK TYPE
I-PLATES TYPE
METAL LATH PRODUCTS
A-METAL LATHS AND HY-RIB
STUCCO STEEL
CORNER BEADS
CHANNELS AND STUDS
MORTAR BOXES
METAL TRIM
STEEL JOISTS
P-G (PLATE GIRDER) JOISTS
O-T (OPEN TRUSS) JOISTS
ACCESSORIES
REINFORCING STEEL
BARS
COLUMN HOOPING
STEEL FORMS
FLOETYLES
LOCKTYPE
INSERTS
ENGINEERING SERVICE
REINFORCED PAVEMENTS
WELDED STEEL FABRIC
CONTRACTION JOINTS
CURB BARS
STEEL ROAD FORMS
STEEL POLES
H-FRAMES
DISTRIBUTION POLES
TELEPHONE POLES
ELECTRIFICATION STRUCTURES
PIPE LINE SUPPORTS
PRESSED STEEL UNITS
PRODUCTS OF THE
LABORATORIES, DETROIT
WATERPROOFINGS
TECHNICAL PAINTS
FLOOR HARDENERS
CEMENT ROOFING TILE

Truscon simplifies purchasing and effects other definite economies by affording a single source of supply for all permanent building-product needs. Truscon Products are of proved quality and nationally known. And Truscon's great manufacturing facilities and nation-wide warehouse system assure prompt deliveries. No matter when or where materials are wanted, or how large the requirement, you can always depend on Truscon.

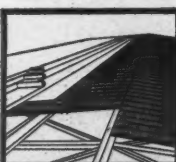
Truscon Leaders for Permanent Construction



Truscon Steel Windows. Pivoted, Projected, Casement and Basement Steel Windows and Lintels carried in stock for immediate delivery. Types for every building, including Double-Hung, Projected, Continuous and Counterbalanced Windows and Mechanical Operators.



Truscon Steel Doors. Stocked in Standard, Swing or Sliding Types. Also furnished in any size with various methods of operation to meet any condition.



Truscon Steeldecks. Modern, fireproof roofs—light in weight, insulated to any degree and waterproofed. Economical in cost and quickly erected from standardized sections. I-Plate and Ferrodeck Types.



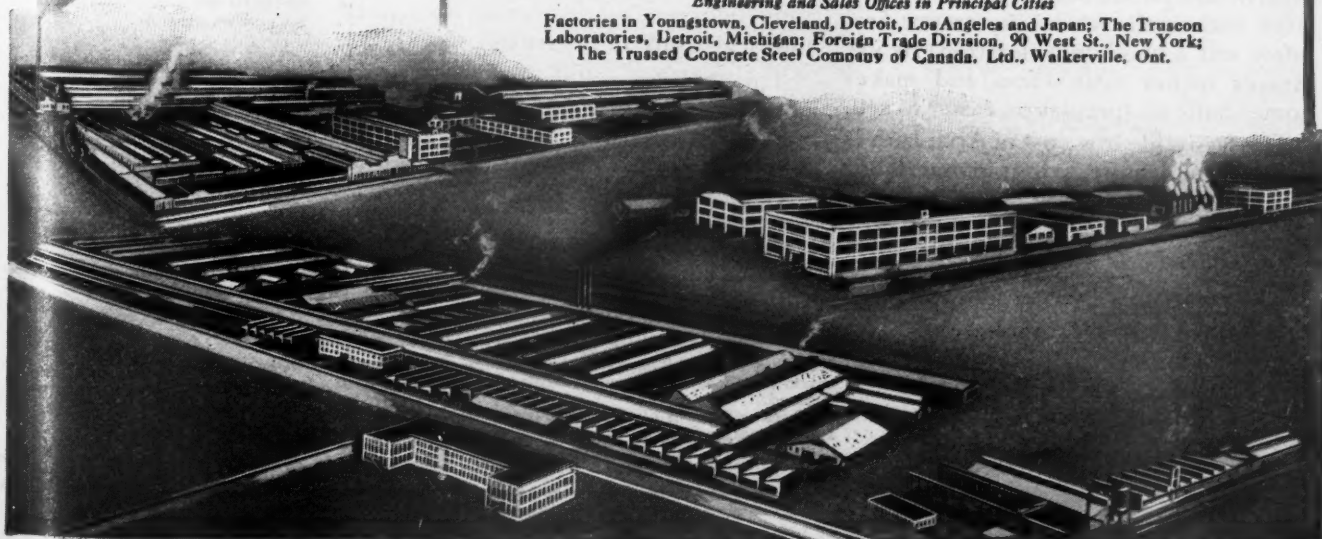
Truscon Steel Joists. (O-T) Open Truss and (P-G) Plate Girder Types for economical, light-weight, fireproof floor construction. Truscon also furnishes Structural Steel, including Trusses, Craneways, Purlins, etc.

Individual catalogs on any line of products sent on request.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

Engineering and Sales Offices in Principal Cities

Factories in Youngstown, Cleveland, Detroit, Los Angeles and Japan; The Truscon Laboratories, Detroit, Michigan; Foreign Trade Division, 90 West St., New York; The Trussed Concrete Steel Company of Canada, Ltd., Walkerville, Ont.



SPECIALTIES for Quick Sales and PROFITS

Better Plastering at Lower Cost with ARCH LATH.



Whether you build on contract or build to sell, you will profit by using Arch Lath.

This distinctive metal lath enjoys national prestige. It has been used in many of the country's finest buildings—auditoriums, schools, apartment buildings, hotels, public buildings—in homes, large and small, where skyscraper fire-safety was a chief consideration. Its use assures owner satisfaction and makes homes built on speculation easier to sell.

The favorable low cost of Arch Lath is the result of definite savings in time, labor

and material. Arch Lath is a plaster saver—not a plaster "skimper". The arches permit only the correct amount of plaster to squeeze through the openings for perfect "key". The rigidity of the sheets of Arch Lath makes for easy, quick erection and assists rapid plastering. There is no sagging between supports and no "give" under pressure of the trowel.

This, briefly, explains why Arch Lath enjoys wide popularity. Let us send you more information—prices—samples. Write to us today.

WHEELING CORRUGATING COMPANY, Wheeling, West Virginia

Branches: New York, Buffalo, Philadelphia, Chicago, Minneapolis, St. Louis, Kansas City, Chattanooga, Richmond, Des Moines, Columbus, Ohio

Photograph of Living Room, George Mellow home, Fair Oaks Estate, St. Louis County, illustrates how effectively unusual plaster textures are carried out on Arch Lath. This plaster base has the rigidity of a solid sheet of steel, making it easy to plaster—insuring better workmanship.

George Mellow Home

MARCELL BOULICAULT
Architect

KUHN CONSTRUCTION
COMPANY

General Contractors

H. C. ANDERSON
Plastering Contractor

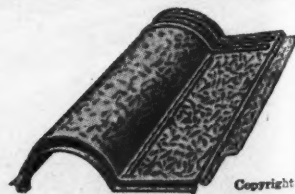


For Weather-proof Roofs of Distinction—
Wheeling Spanish Tile

Wheeling Spanish Tile Roofs have all the character and charm of old Spain. The most artistic roof covering manufactured.

Wheeling Spanish Tile is low in cost, durable, leak-proof and lightning-proof.

Write for full information



Copyright 1929

Frank P. Williams, builder of
hundreds of homes in the finest
sections of Sacramento, California

I refuse to go back to fix a door

*How FRANK P. WILLIAMS,
Sacramento contractor, avoids this
common nuisance and expense*

SENDING a man back to a few months old house to plane down sticking doors, or to replace one that's badly warped—it costs you money. And it does your reputation no good.

That is one kind of grief that Frank P. Williams refuses to put up with any longer. A builder of hundreds of fine homes in Sacramento, Calif., Williams has had his share of door trouble. Now he never has any. "Laminex doors eliminated it," he says.

Laminex doors don't swell or shrink and they don't warp. They can't, the way they are constructed: Of blocks with grains crossed so that the direction of stresses is balanced; with full-length edge braces; multi-section rails; oversize dowels; 3-ply opposed-grain

panels. All water-proof cemented with famous Laminex cement. During scores of public Laminex water tests, Laminex doors taken from stock have been soaked for days without warping or coming apart!

A Laminex door will cost the owner a few cents more. On a six-room job the difference might

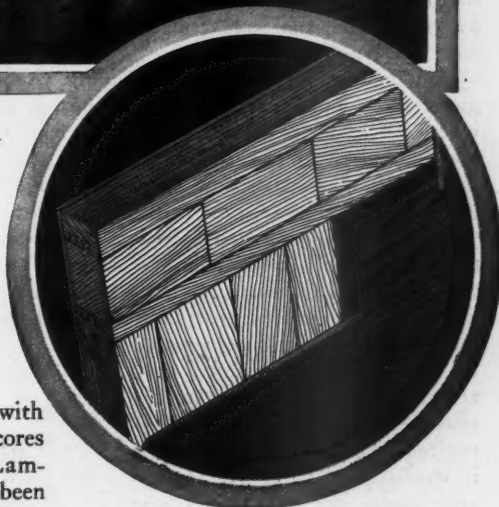


Oversize (5/8") dowels—and one more than is used in the average door. Also water-proof Laminex cement!



3-ply panels with grain crossed; water-proof cemented under tremendous pressure. They won't buckle or blister.

The meandering flower figure of these Douglas Fir doors takes stain and varnish with striking effect when Laminex doors are painted or enameled and there's no pitch to break out in ugly pimples!



The Laminex stile is built of separate, selected core blocks with the grain crossed. Any tendency of the one to shrink or swell is counteracted by an opposing tendency of its neighbor. Blocks locked together and to dove-tailed, full-length edge braces with water-proof Laminex cement

amount to three or four dollars. But the doors of that man's house will never worry him. Nor you!

Send the coupon below for the names of local Laminex dealers, and complete information about these grief-free doors. You'll want them in your next job.

THE WHEELER, OSGOOD COMPANY
Dept. E-19, Tacoma, Washington.

Please tell me more about trouble-proof Laminex doors and where I can get them.

Name.....

Address.....

City..... State.....

LAMINEX DOORS

Will not swell, shrink, or warp

CONSTRUCTION MATERIALS

of Quality

For the EXTERIOR build

SELLING POINTS into the Design

ANY architect will tell you that construction materials and building design must always be considered together. They are inseparable in the working out of an harmonious and satisfactory architectural effect. Therefore, those specialties which come under the classification of exterior construction materials are the first specialty items to which the builder directs his attention in planning new construction.

The quality obtained for a building from well selected materials is built directly into the design of the building where all may see it. It is the first thing to which the merchant builder directs the attention of his prospect. The exterior construction specialties which produce this quality should be selected with the utmost care.

No builder would plan a Spanish style house and finish the walls with stained shingles. Such a finish would be entirely out of harmony with the architectural style. Nor will the wise builder erect a house with below standard materials or materials not adapted to the purpose for which they are used. Even though such a practice might go practically unnoticed when the house was new it would soon make its appearance under the attacks of time and the elements and the house would stand as a stumbling block to sale of future houses.

In selecting these exterior construction materials the choice of design and wall materials will go hand in hand. If the Spanish design referred to is to be used, the walls may be of frame construction with metal lath and stucco in appropriate texture and color. Almost any color is available with the excellent cement and mortar colors now on the market. Or the stucco may be applied on masonry, cement tile, monolithic concrete, or one of the special patented construction methods which have proved their worth for the forming of walls, for insulation and as stucco bases.

Stucco may also be used with other architectural styles, the texture and color being varied to fit the style, or masonry walls of common or face brick, of stone or some of the specially finished tile or cement may be used. In the masonry walls thought will be given to obtaining the right mortar colors and style of mortar paints will be considered. With stucco and concrete waterproofing compounds may be used. Then there is the frame house with various types of siding and shingles which are most appropriate for certain styles and which offer great flexibility of design.

For the roof there are also a wide variety of materials ranging from wood shingles through metal shingles and tile, composition roofing and shingles, asbestos roofing and shingles, and so on. Here, too, color is an important consideration for these days plain drab roofs are no longer popular. Many buyers demand color in the roofs of their future homes and the attractive color of a roof is a strong selling point.

Specialties of Construction—Exterior

Roofing Materials:

Metal Shingles and Tile, Stained Wood Shingles, Composition Shingles and Roofing, Asbestos Shingles and Roofing.

Non-Rusting Sheet Metal Work
Special Windows, Special Window Frames

Wall Materials:

Brick Common, Face Brick, Stone, Clay, Tile, Cement Tile, Gypsum, Cinder Concrete, Cement Stucco, Terra Cotta, Cement, Bricklayers' Cement, Lumber, Siding, Shingles, Mortar.

Waterproofings

Lightning Rods

Weatherstrips

Plate Glass and Special Sheet Glass

Special Patented Construction Methods

Greenhouses

Mortar and Cement Colors

Metal Column Bases

Iron Railings

Cut Nails

Skylights

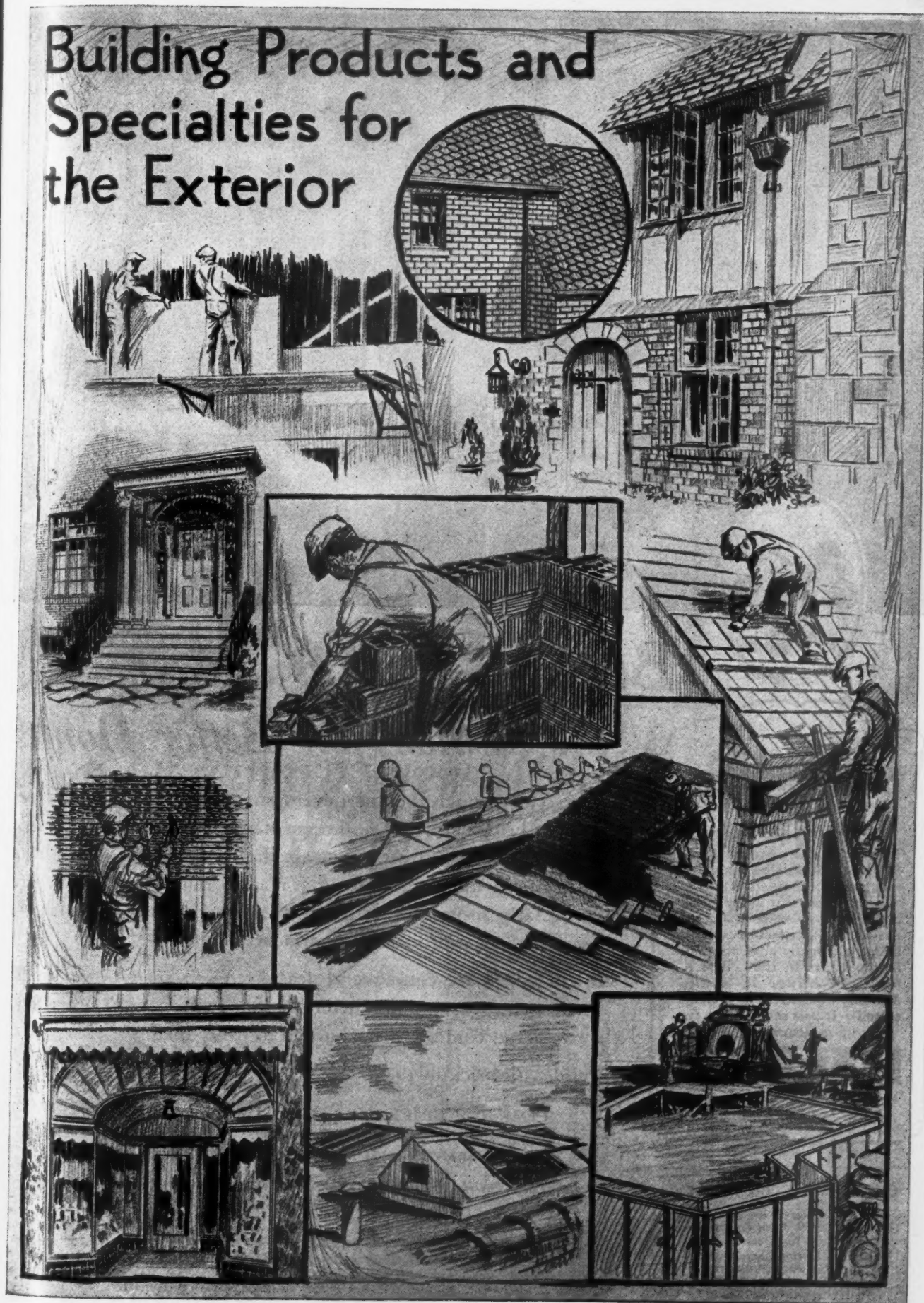
Store Fronts

Steel Columns



The Graceful Design of These Classic Columns, Worked Out in Hollow Steel, Forms One of the Strongest Points of Sales Appeal in the House of Colonial Style.

Building Products and Specialties for the Exterior





To Help You Sell

This is a bronze casting the size of a brick. It will be issued to you, by any of the district offices, for installation in every brick house whose walls pass an Association inspection. It is being nationally advertised. It is a guarantee by the C. B. M. A. that the house is Sound Masonry construction. It helps to sell—it *does* sell. Write for information.

BRICK

beauty forever

Clip and Mail This TODAY

Without charge please send me a copy of "Common Brick." I am enclosing cash or stamps for the booklets checked.

- ☐ "Homes of Lasting Charm" 25c.
- ☐ "Skintled Brickwork" 15c.
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- ☐ "Farm Houses of Brick" 5c.
- ☐ "Brick, How to Build and Estimate" 25c.
- ☐ "The Heart of the Home" (Fireplaces) 25c

(Enclose \$1.00 if you want all the books)

BRICK—Now, as always, the fashion for Better Homes

DRIVE through the fine developments and count the houses of brick. You will find them standing side by side and face to face on every street. They are the fashion now. They have always been the fashion, for that matter, but today people are particularly insistent that the money which they spend for a home shall be a protected investment.

Brick houses are consequently easier to sell than other kinds. Their virtues—minimum deterioration, low upkeep, fire safety, warmth and comfort—are known to every man.

Build with brick in 1929.

COMMON BRICK MANUFACTURERS ASSOCIATION of America

Ja2131 GUARANTEE TITLE BUILDING

CLEVELAND, OHIO

These District Association Offices and Brick Manufacturers Everywhere
Are at Your Service:

Boston	11 Beacon Street	New Orleans, La.	727 Canal Bank Bldg.
Chicago	228 No. La Salle St.	Norfolk	112 West Plume Street
Cleveland—Ohio Assoc.	2124 Guar. Title Bldg.	Philadelphia	1420 Walnut Street
Denver	1735 Stout Street	Pittsburgh	524 Fourth Avenue
Detroit	400 U. S. Mortgage Trust Bldg.	Raleigh, N. C.	508 Com. National Bank Bldg.
Hartford	226 Pearl Street	Rochester	P. O. Box 773 (N. Y. State District)
Los Angeles, Calif.	634 Chamber of Commerce	Salt Lake City	301 Atlas Block
New York City	1716 Grand Cent. Term.	Seattle, Wash.	913 Arctic Building
San Francisco	461 Market St.		



Announcing a New Window by Crittall **STANWIN CASEMENTS**

FOR investment buildings and speculative residential work Crittall now offers Stanwin Casements.

A light weight standard metal casement in the usual range of sizes and designs—and in a few that are new and exclusive—Stanwin Casements are offered at strictly competitive prices. Considerably heavier than most steel casements in the light weight class, with substantial solid bronze hardware as standard equipment, this sturdy window is built to meet the requirements of many of your jobs.

Doors, too, in stock sizes, both double and single, are part of this new line. They are of

far better quality than the term "stock door" might imply. Fitted with bronze thresholds, steel kick plates and locks, operating from both sides, they can be used in many places with artistic results.

Here and there in the average house is the need for an inward opening casement. These also will be found in this very complete range of standard windows.

Our new catalog on Stanwin Casements is now ready for you. Ask for your copy today.

CRITTALL CASEMENT WINDOW COMPANY
10981 Hern Avenue Detroit, Michigan

Stanwin Casements
Norman Casements
Universal Casements

CRITTALL
CASEMENT WINDOW CO.
DETROIT, MICHIGAN.

Warehouse stocks at all central points. An opportunity is offered to a limited number of dealers.

SPECIALTIES for Quick Sales and PROFITS

Save Money in Building



By Using STRONACH NON-SPLITTING NAILS



Note Comparative Tests

U. S. Patent
No. 1466676
Other Patents
Pending



PITTSBURGH TESTING LABORATORY

ESTABLISHED 1881
INSPECTING ENGINEERS AND CHEMISTS

PITTSBURGH, PA.

Laboratory No. 63175
December 3, 1928

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DALLAS

SUBJECT:

REPORT OF COMPARATIVE TESTS FOR HOLDING POWER OF
BRIGHT COMMON DIAMOND POINTED NAILS VERSUS BRIGHT STRONACH SPECIAL
NON SPLITTING NAILS

FOR
STRONACH NAIL COMPANY, UNION BANK BUILDING, PITTSBURGH, PENNSYLVANIA

All nails were driven radially or into the tangential surface, into the same piece of 4"x4" dry yellow pine block as shown by diagram opposite and pulled immediately afterward.



Lot	Approximate number of nails per pound	Size	Depth Driven	Average load to withdraw in pounds
#1	106	8D Diamond Pointed 2-1/2 x 10-1/4	2"	329
#2	161	7D Stronach Special 2-1/4 x 11	1-3/4"	355
#3	106	8D Stronach Special 2-1/2 x 10-1/4	2"	453

Stronach Special 7D driven 1-3/4" into the wood has nearly 8% greater holding power over the 8D Diamond Pointed Nails driven to the depth of 2".

Stronach Special 8D has nearly 38% greater holding power more than the 8D Diamond Pointed Nails driven to the same depth 2".

Respectfully submitted,
PITTSBURGH TESTING LABORATORY

J. W. Reiff
J. W. Reiff
Engineer of Tests

**ON ACCOUNT OF INCREASED HOLDING POWER
YOU CAN USE**

**7D STRONACH NON-SPLITTING NAILS in place of 8D Diamond
Pointed Nails and build stronger and better buildings**

50% MORE NAILS PER POUND SAVES YOU MONEY

Sold to the BUILDING TRADE through
YOUR RETAIL LUMBER DEALER

The Stronach Non-Splitting Nails are manufactured exclusively
by the

STRONACH NAIL COMPANY
1805 Union Bank Building
Pittsburgh, Pa.

TRADE MARK
Copyrighted



TRADE MARK
Copyrighted





The Lewis House at Brookfield, Mass., built of Pine about 1770, presents a graceful fence which you may wish to clip for your files

In America The Oldest Homes Are Of Pine

SINCE early Colonial days, Pine has been the building material of the nation. The homes of the Pilgrims and most of the homes built before the Revolutionary War were of Pine.

No style of home architecture possesses more charming dignity than the Colonial. Such homes of Pine are substantial, enduring and economical.

You can still plan and build homes for your clients of the tested building material of our ancestors as there is a plentiful supply of selected Shevlin Pine for you to use.

Leading lumber dealers can supply five varieties, always smoothly milled, carefully seasoned and rigidly graded: Shevlin Northern White Pine, Shevlin California Sugar Pine, Shevlin California White Pine, Shevlin Norway Pine and Shevlin Ponderosa Pine.

If you wish data on Pine—its uses, physical properties, and allowable stresses—write for the booklet, "Specify Shevlin Pine."

Shevlin, Carpenter & Clarke Company
903 First National - Soo Line Building, Minneapolis, Minn.

Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.; San Francisco Sales Office: 1028 Monadnock Bldg.; Toronto, Ontario, Sales Office: 606 Royal Bank Bldg.; Sold in New York by N. H. Morgan, 1205 Graybar Bldg., 420 Lexington Ave.



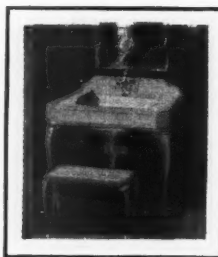


New Colors of Distinction for Plumbing Fixtures

These new and varied colors created for "Standard" Plumbing Fixtures now enable the builder of fine homes to impart a distinctively different touch to every home he builds—an *individuality* that evidences not merely the absence of monotony but the presence of character.

The salient characteristic of "Standard" colors is purity. This is as true of the delicate hues as of the deeper shades. There is an absence of grayness—the common denominator which reduces all colors to negative value. "Standard" chemists have translated into reality an artist's conception of pure, beautiful colors in plumbing fixtures.

In variety, too, as in purity, "Standard" colors open the way to a more intimate expression of individuality in bathroom decoration. Imagine the attractiveness of



a bathroom with fixtures in Ming Green, Claire de Lune Blue, du Barry Rose, or, as pictured here, in the loveliest shade of Vincennes Orchid.

But selection is not limited to delicate tones. A blue, with the depth of ultramarine, or a red with the rich warmth of burgundy—these colors are available in "Standard" Plumbing Fixtures. *Enduringly* beautiful, too, they are. If desired, they can be had in Acid-Resisting Enamel, which defies fruit acids to spot and stain its hard, glass-like surface.

See these new colors at a "Standard" Showroom. Consider their value, in company with the distinctive design of "Standard" fixtures, as a compelling proof of quality in the homes you build. Easier turnover and better prices may confidently be anticipated.

Standard Sanitary Mfg. Co., PITTSBURGH

"Standard"
PLUMBING FIXTURES

WHAT'S NEW?



EDITOR'S NOTE: *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 105 W. Adams St., Chicago.*

Produce Closed End Floor Tile

BECAUSE of the outstanding advantages in safety, economy and dead weight that a closed end floor tile would afford, the clay industry has sought for years for some practical method of manufacturing it, with no success. It remained for Mr. S. F. Heckert, a practical architect and president of a large company in the tile manufacturing field to design and perfect a process permitting the quantity production of twelve by twelve inch units, in depths for all standard floors.

This special manufacturing process produces a unit that is entirely enclosed in a solid tile shell, strengthened by the usual interior tile webs.

This tile is especially adaptable to two-way combination floor systems, consisting of 4-inch or 5-inch reinforced concrete joists, spaced 16 inches to 17 inches on centers in

columns and footings recommend the tile to the entire field.

Then, of course, there are the additional virtues of obtaining a strictly fire-proof construction, having a highly desirable base for a plastered ceiling, ease in laying, and a minimum depth of floor and supporting beams.

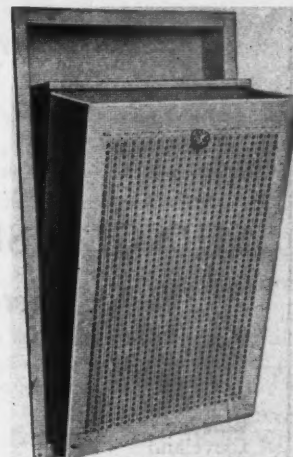
In addition to its use for floors, this tile may be used for ordinary partition work, giving a uniform mortar bed, which facilitates setting, and saves mortar.



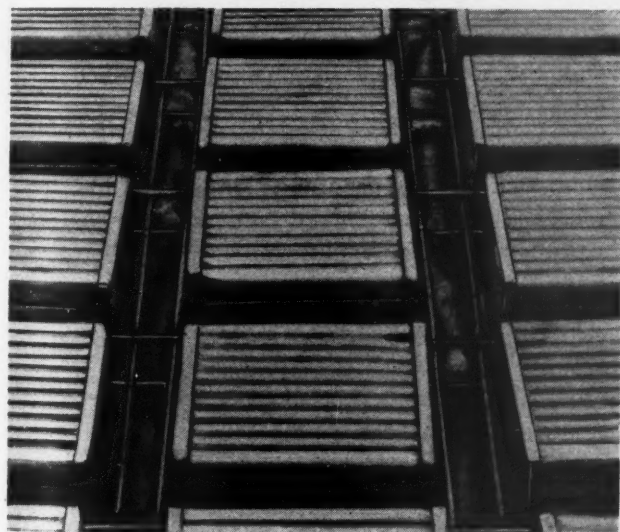
Built-in Steel Clothes Hamper

ONE more built-in convenience for the home has made its appearance in the form of an all-steel hamper for soiled clothes. This inexpensive piece of equipment offers a number of advantages which will instantly appeal to the women and create an added desire for the houses of which it is a part. In the first place they take up less room than the old-fashioned hamper—in fact, they take up almost no room when not pulled out to put clothes into them, as they are recessed into the wall and protrude only a few inches into the room. They are entirely sanitary; there is no danger of mildew, as the front is finished in a cane effect which provides ample ventilation. They can be built into any room or closet. If placed in a closet they are, of course, entirely out of sight, but if installed in the bath room they do not detract from the appearance of the room, as they are finished in a beautiful and permanent snow-white enamel.

These hampers are made of the best grade of steel and form a permanent installation. They are 18 inches wide, 30 inches high and 8 inches deep. The wall opening required is 35 inches high and 4 inches deep and 18¾ inches wide. They are suitable for installation in new or old houses.



An All Steel Clothes Hamper Which Can Be Built Into the Wall, Protruding Only a Few Inches.



Closed End Floor Tile Are an Outstanding Development Which Make Possible a Considerable Economy in the Placing of Two-Way Combination Floor Systems.

two directions at right angles to each other, with the tile between the joists. A monolithic concrete topping may or may not be used, depending on the designer's requirements.

In ordinary construction there is a considerable waste factor (sometimes exceeding 20%) due to the concrete running into the open ends of the tile. Because of this waste, the dead load of the floor itself is increased which in turn increases the size of beams, columns and footings. This increase in dead load cannot be accurately determined.

Through the use of the closed end tile, however, this waste is eliminated; and the dead weight can be predicted with certainty, based on the true sectional area of the joists and the known weight of the tile.

These advantages plus the economy shown in the beams,

SPEAKING of ROOFS —

3 Men Ask 3 Questions:

The Dealer:

Is it a salable material on which I can make a reasonable profit?

The Contractor:

Will it help sell my houses?

The Home Owner:

Will it give me Safety, Service and Satisfaction?

The Answer to All Three Is YES! When Ambler Asbestos Shingles Are Used

Since 1905 Ambler Asbestos Building Products have set the standard of excellence in fireproof building materials which others have emulated but none excelled.

The greatest national advertising campaign in the history of the company is under way. The user as well as the builder is being told of the advantages of Ambler Asbestos Building Products.

Besides the outstanding building magazines, space has been taken in "House Beautiful," "House & Garden," "Country Life," "The American Home," "The Small Home," "The Dairy Farmer" and architectural magazines.

No needed expense will be spared to impress upon the house-owner, present or prospective, the wisdom of using Ambler Asbestos Shingles.

To the dealer we offer abundant sales helps and the personal assistance of a trained sales force.

To the contractor we offer a material which is attractive, fire-proof and indestructible, plus a campaign to make Ambler Asbestos Products even better known.

To the home builder we will stress again and again — "Above All — A Permanent Roof."

The name "Asbestos" is a guarantee against fire. Asbestos plus Portland Cement means permanence and indestructibility—a roof that will outwear the house. Ambler Asbestos Shingles are of several colors and types. We offer without charge or obligation a new "Selection Sheet" folder.

ASBESTOS SHINGLE, SLATE & SHEATHING CO.

Factories: Ambler, Penna.
St. Louis, Mo.

Branches:

New York
Chicago
Cleveland
Pittsburgh

Philadelphia
Minneapolis
Washington
Boston
Detroit

Milwaukee
Omaha
Wilkes-Barre
Cincinnati

To the Dealer:

Ambler Asbestos Building Products can be an important addition to your line. Write for our sales proposition.

SPECIALTIES for Quick Sales and PROFITS

Hurricane area laid waste — **STOCKADE SURVIVES!**



This Stockade dwelling survived (bottom photo) when neighboring houses of supposedly permanent construction fell before the onslaught of the storm.

A graphic true story is told in this amazing letter from the hurricane area:

Lake Worth, Fla.
October 1, 1928

The Stockade Corporation,
228 North La Salle St.,
Chicago, Ill.

Gentlemen:—

During the hurricane of September 16th at Lake Worth it was my good fortune to be able to take shelter, with my wife and two children, in the Stockade home of Fred Schulz, 1500 Palm Way. Our own home situated half a block away had had all the windows smashed in by the wind and as the roof began to move, we felt it was better to get out than be crushed by the falling walls.

Fortunately for us the Schulz's had left without locking the back door and we took refuge there during the worst part of the hurricane. The Barometer fell as low as 27.95, practically the lowest on record.

We wish you to know that the house did not even quiver and further that the terrible roaring of the wind could hardly be heard inside of the house. After the hurricane subsided, the only damage was a broken eave caused by a falling chimney.

All around this vicinity other places, not of your construction, were either very badly racked and buckled or completely demolished.

We expect to build our next home with Stockade as we feel it meets the need of stronger construction here in Florida.

Sincerely yours,

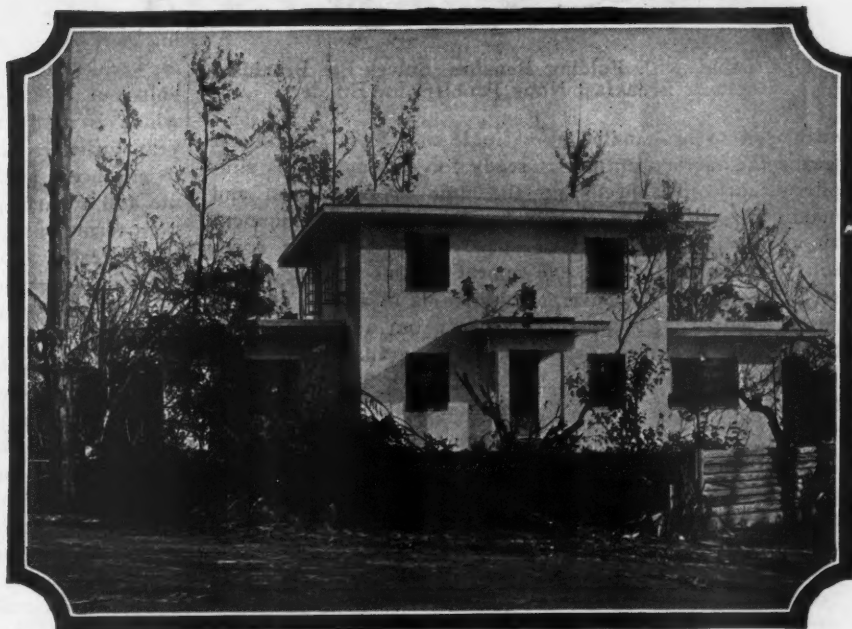
W. L. Ganung

611 N. E St.
Lake Worth, Fla.

Sworn to and subscribed before me this
1st day of October, 1928.

[Signature]

Notary Public, State of Florida at large.
My Commission expires Jan. 26, 1932.



PERMANENT structural strength is a small part of the amazing Stockade story.

Stockade units act as molds for concrete, remaining in place after the concrete hardens and providing three to five times the permanent insulation of most other building materials!

Walls of stockade are laid up so quickly that a worthwhile difference is noticed in building costs. A Stockade mold is equivalent in size to 8 bricks, yet weighs only as much as one brick. There are no mortar joints between the units, no cracks to admit heat or moisture.

Plaster and stucco bond perfectly with the Stockade wall surface, without lath or furring strips. Cracks are virtually unknown.

A wide variety of individual architectural effects are obtainable, with Stockade, using shingle, siding and brick exteriors. Homes built of Stockade possess the strength and permanence of reinforced concrete construction; beauty, comfort and value that belong to the highest type of building construction.

A new book tells the whole Stockade story. Ask for Booklet AB-1. Write for it today—no obligation.

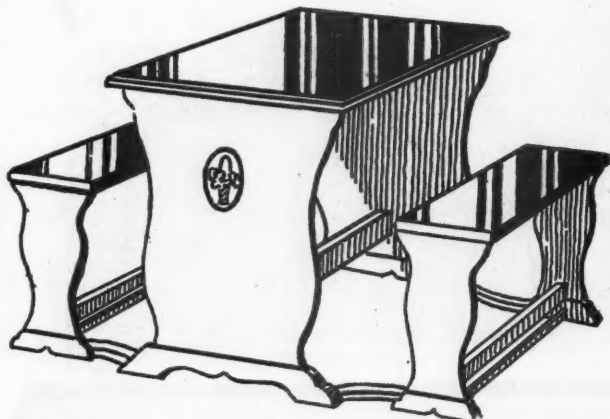
THE STOCKADE COMPANY

228 North La Salle Street, Chicago
347 Madison Avenue, New York City

Breakfast Room Equipment

BECAUSE a cozy breakfast room, or at least a possible breakfast nook in the kitchen, has become almost indispensable to the salability of a modern house, the table illustrated here, with its attractive folding benches, is helping thousands of builders to solve their sales problem. This equipment provides for the comfortable dining of four people in a space five by five feet. With both benches folded under, the set occupies only 45 inches by 26 inches and when both benches are open, only 45 inches by 52 inches. This permits working space on all sides by just touching the benches and letting them swing compactly beneath the board.

The set-in feature eliminates any installation cost and



This Table, with Folding Benches, Solves the Breakfast Room or Breakfast Nook Problem for Builders.

enables it to be handled as a single unit from the time it leaves the factory until it is ready for serving. This simplicity not only speeds up the time of production and makes finished results certain, but it makes this equipment an exceptionally low priced space-saving breakfast room set, it is claimed. The eye appeal of this folding bench set is stimulated by clever combinations of all the modern pastel shades. It is possible to work out any color combination and stippled shadings and rich gradations of tone. The lifetime lacquer finish is said to have five more coats than the finish of ordinary furniture.

That the set appeals to the housewife has been proved in hundreds of exhibition homes where its voguish lines and color have displayed style, while its utility and compactness assure maximum convenience. The cozy ready-to-use appearance of the set gives the model home a furnished appearance and supplies a homelike invitation to "start living right there at once." This suggestion has turned many a desire to buy into a resolve to buy and hastened the closing of a sale.

The manufacturers state that one architect says he was able to get one more apartment to each floor of his building by planning on this equipment and reducing the size of his breakfast room. And he also stated that the beauty of the set was a big renting feature when the building was completed. There are many official endorsements of this diner-ette and the New York Herald Tribune Institute has put its seal of approval upon it.



New and Improved Awning Fixtures

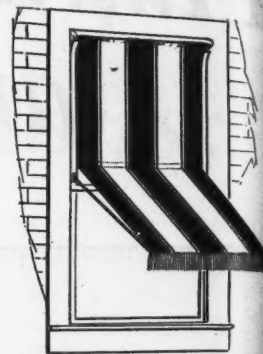
AFTER six years of experimentation and testing in more than 60,000 installations, a certain manufacturer has perfected an awning fixture that marks a big step forward in the awning business, according to a recent announcement. This fixture is so designed that it keeps the awning taut, strong and sturdy at all times. It operates like a roller

curtain from the inside and can be raised or lowered to any desired angle, permitting ample light and ventilation as well as effective shading.

Once installed, awnings equipped with this fixture need never be taken down. The complete awning, when not in use is underneath a protective hood.

No winter storage is necessary. Eliminating the annual putting up and taking down of the awnings saves labor which is figured as two-thirds of the upkeep cost of the old type of awnings.

These awnings are so designed that cigarettes and cigars which may be thrown from rooms above and fall on the awnings roll off instantly and so do not burn the awnings. These awnings not only keep the rooms cooler and better ventilated and save the furnishings from fading, but also give an air of distinction which enhances the appearance and value of any home, apartment, office building, hotel, hospital, factory or other building.



Awnings Fitted with the New Fixtures Are Permanent and Save the Cost of Putting Up and Taking Down.



New Dependable Paint Spray

AMONG the latest developments in the line of spray painting equipment is a new, portable machine weighing only 76 pounds. It is equipped with a $\frac{1}{2}$ H.P. motor of well-known make, operating on A. C. 60-cycle 110-220 volts, or D. C. 110-220 volts. The rotary compressor, which is really the heart of the machine, carries a two-year guarantee against loss of efficiency. It is designed to produce a positive air volume of five cubic feet per minute and a varying working pressure of 15 pounds.

In terms of the painter on the job, this insures the necessary steady supply of air without having to stop for pressure and volume to build up. The machine is guaranteed to furnish an adequate supply of air at an unvarying pressure.

This machine is equipped with the company's latest type, standard size, low pressure, two finger, gun, light, well-balanced and instantly responsive to the desires of the operator. Other important parts of the outfit are a one-gallon, pressure feed tank, with removable cover and handle, a one-quart aluminum cup, an air filter with extra filter cartridge, 25 feet of heavy electric conductor cord with switch to motor, 20 feet of $\frac{3}{8}$ -inch air hose from paint tank to gun and five feet of $\frac{3}{8}$ -inch special paint hose from paint tank to gun.

The whole outfit is mounted on an all aluminum base with aluminum guard enclosing the drive, which is a link belt, silent chain with steel sprockets. The compressor is equipped with an automatic oil cup, pressure gauge and air filter intake muffler, insuring almost totally noiseless operation.



Here Is a Portable Paint Spray Outfit Weighing Only 76 Pounds and Producing Steady Dependable Service.



"The Home Garage of Concrete Masonry" is a new booklet published by the Portland Cement Association, 33 W. Grand Ave., Chicago, presenting some interesting examples of modern garages designed to harmonize with the house.

The NATIONAL "Little Brute"

The
National
"Little Brute"

A Fast Powerful Floor Surfacer for Only

\$147⁵⁰

is the biggest value
ever offered in floor
surfacing equipment.

Simplicity of design—plus
mass production—makes pos-
sible this unheard of low price.

Built on the same plan as the big
Nationals, the "LITTLE BRUTE" is a
high speed, big production machine,
equipped with 7-inch high-speed sanding
drum—does as much work as five hand scrapers.

Lowest in Price Lightest in Weight

The "LITTLE BRUTE" will remove
ten coats of varnish from floors,
without neutralizers. It's dust-
less all the time. The separate
vacuum dust collector mo-
tor always operates at
maximum speed. Suc-
tion never fails even
if main motor is
slowed down
by heavy
pull.



Our Guarantee

If the National "LITTLE BRUTE"
is not entirely satisfactory
after five days' use, return it
and your money will be
PROMPTLY REFUNDED.



Pays for Itself on One Job

The "LITTLE BRUTE" will pay for itself sand-
ing the first 10,000 square feet. And it's the handy
machine for the Contractor! Compact! Light in weight
—only 115 lbs. Easy to take anywhere, completely assembled.
Low in cost. The ideal sander for contractors, painters, decorators,
schools, hotels, public buildings, dance floors, bowling alleys, etc.

A Brute for Work

Full information
on request.

The NATIONAL Line

Model B (9-in. Drum) \$225.00 Model E (12 in. Drum) \$250.00 "LITTLE BRUTE" \$147.50

THE NATIONAL SANDING MACHINE COMPANY

4565 Diversey Avenue, Chicago, Illinois

COMPARE THESE PRICES—YOU CAN BUY ALMOST TWO "LITTLE BRUTES" FOR THE PRICE OF ANY OTHER FLOOR SURFACER

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Pipe Pushing Jack Saves Paving

PUSHING water or gas pipe, or pipe for electrical service or oil heating supply, under paved streets or alleys, or under gardens or lawns, irrespective of the temperature conditions, is a practical modern development. The pipe is gripped by jaws in the center of the jacks, as illustrated, and one or two men operating each of the two levers, cause the pipe to be pushed through the ground powerfully and accurately.

These jacks are built in two sizes, one for pushing pipe of $\frac{3}{4}$ to two inch diameter, the other for pushing pipe of two to four inches diameter. A feature is that each size of pipe requires a set of jaws to conform to the size of the pipe so that the crushing or distorting of the pipe is avoided.



A Pipe Pushing Jack Which Grips the Whole Surface of the Pipe and Avoids Crushing and Distortion.

Laboratory and practical service tests have governed every detail of construction and operation and the materials used and their design are co-ordinated for the single purpose of producing service and long life.

This has made necessary the liberal use of alloy steels and their heat treatment and hardening.

The average time required to push a three inch pipe through 25 inches of solid soil is between five and six minutes, using two men on each of the two levers, or approximately 23 man minutes. This time also includes the resetting of the pushing or traveling portion of the jack.

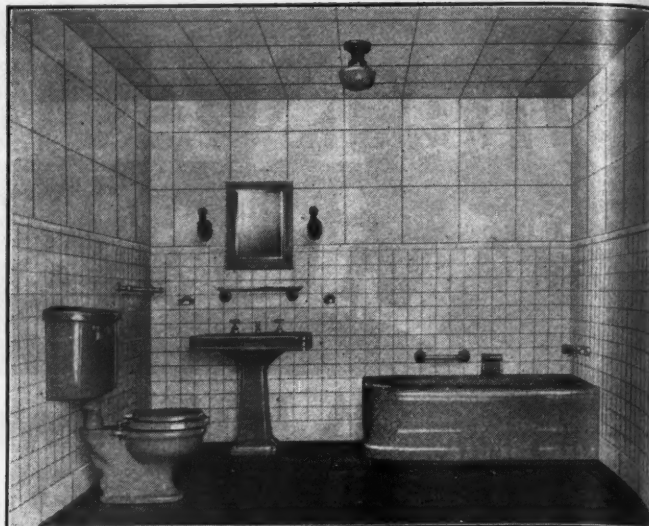


New Asbestos Sheet Tiling

AFTER a number of years of intensive study and experimentation, one of the best known manufacturers of asbestos products has placed on the market a new asbestos tiling made in sheet form. This company has developed a new enameling process to apply to this tiling which, it claims, is superior to the method of spraying lacquer on the surface to obtain the glazed effect and overcomes difficulties formerly experienced with asbestos tile.

The enamel is securely bonded to the impregnated asbestos cement with a water-proofing compound that prevents the entry of moisture at any point and also renders the sheets stronger than before treatment. Tests have been made of this improved method by immersing the enameled stock in water for a considerable period of time, without impairing the bond.

This new tile is produced in a variety of colors, including white, black, buff, pink, smoke, apple green, nankin blue, mottled blues and greens, marbled, walnut and mahogany. These lend themselves readily to various schemes of decoration. Among the chief uses of this tiling are the remodeling of old homes, installation of a second bathroom in homes, side walls for doctors' and dentists' offices, hospitals,



A New Asbestos Wall Tile, Which Is Finished by a New and Improved Method of Enameling, Has Been Used in This Room.

operating rooms, kitchens, lavatories, etc. The sheets come in standard size, 32 inches by 48 inches and $\frac{3}{16}$ inch thick. The panels are scored four by four, eight by eight, and 16 by 16 inches, for the effect. ❖

Tilting Window Hardware

ANY double-hung, wood sash can be equipped with the window hardware used on the window illustrated here. When so equipped, both the upper and lower sash pull inward from the top and lie flat, locking at just the right height for easy cleaning. It is then just as easy to clean the outside of the window as it is the inside, just like washing the top of a table. When in their upright position, sash equipped with this hardware move up and down with perfect freedom.

For ventilating purposes the lower sash can be pulled inward from the top and locked at the proper position to permit a free flow of air without draft and without letting in rain or snow. These windows are weather tight and storm proof, they neither stick nor rattle and they do not interfere with outside screens.

This hardware is easily applied to either new or old construction. It does not require either special frames or special sash. Its use simplifies the housework and also eliminates the risk which always exists in washing windows where it is necessary for the person doing the cleaning to sit or stand on the sill, outside the window, in order to wash the outside of windows.

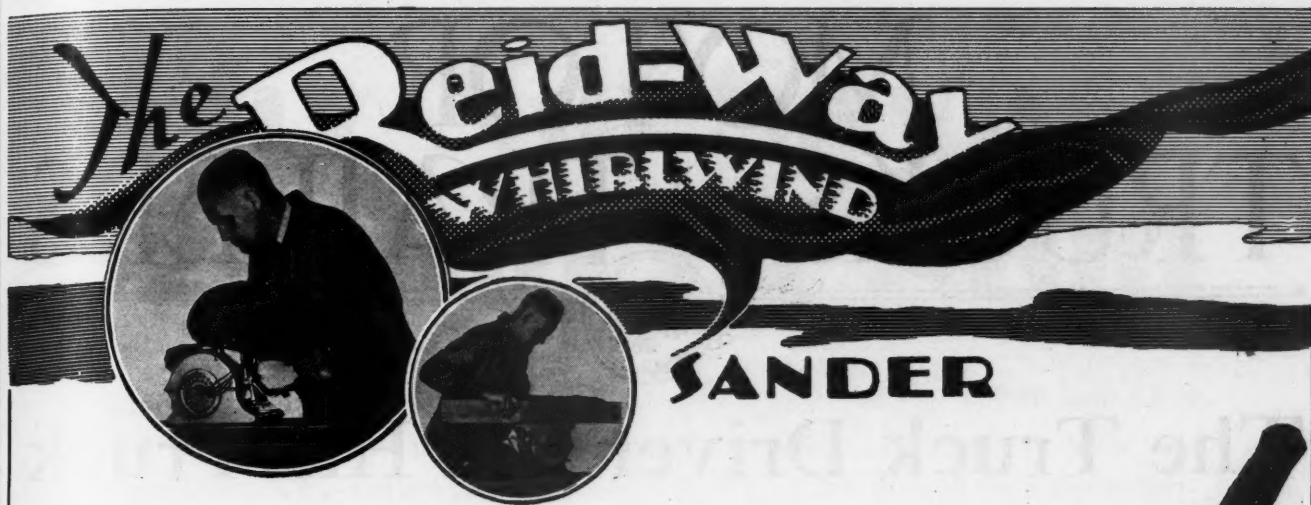
Such an installation is suitable for houses, apartments or office buildings.



Any Double-Hung Wood Sash Can Be Equipped with This Hardware so That It Will Tilt in for Cleaning.

An ex
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Ball bea
and rea
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Reid-Wa
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bench sa



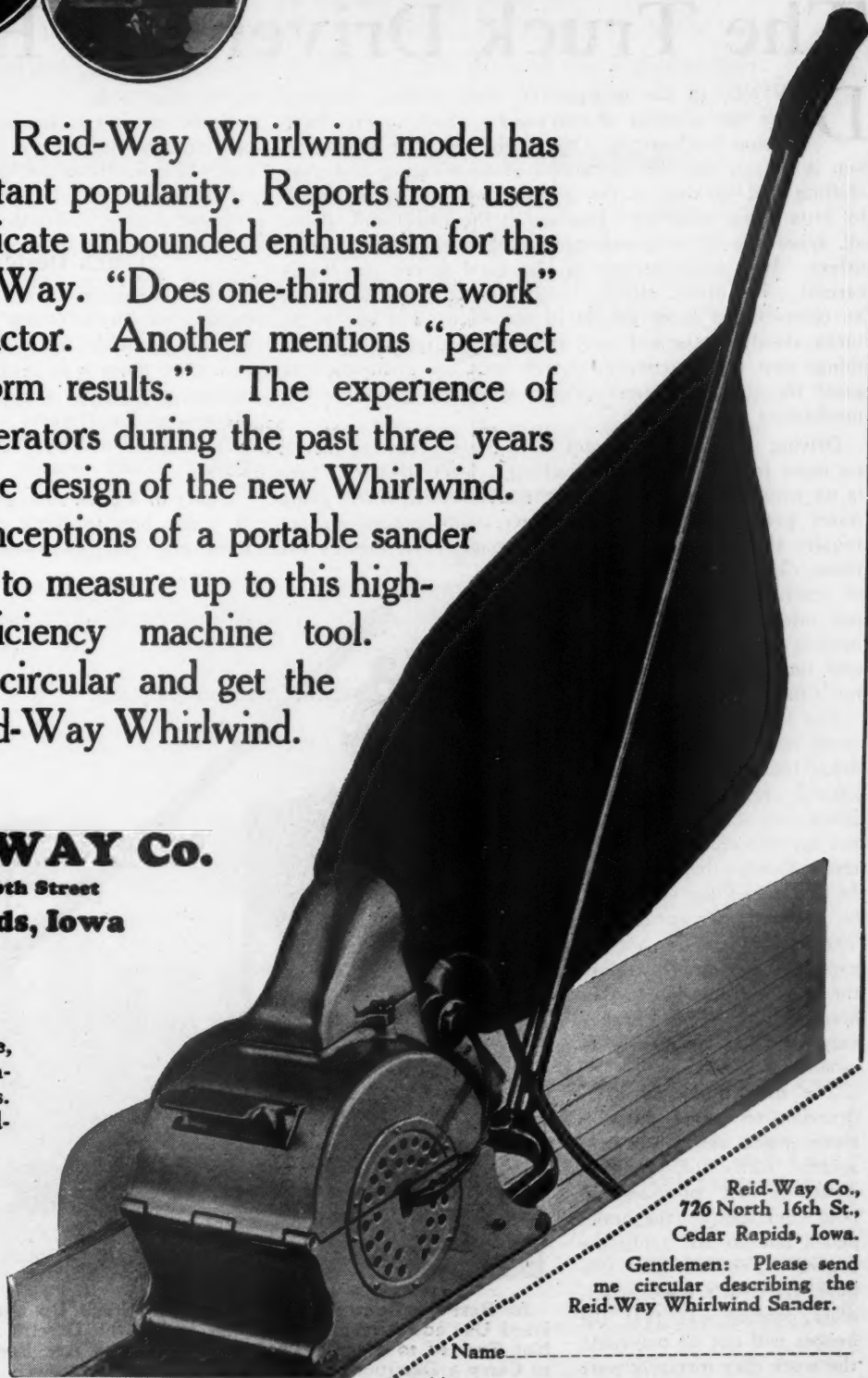
THE NEW Reid-Way Whirlwind model has achieved instant popularity. Reports from users everywhere indicate unbounded enthusiasm for this improved Reid-Way. "Does one-third more work" says one contractor. Another mentions "perfect control . . . uniform results." The experience of hundreds of operators during the past three years is reflected in the design of the new Whirlwind. All previous conceptions of a portable sander must be revised to measure up to this high-speed, high-efficiency machine tool. Write for new circular and get the story of the Reid-Way Whirlwind.

The REID-WAY Co.

726 North 16th Street
Cedar Rapids, Iowa

An exclusive Reid-Way feature, the revolving field motor, eliminates wear and friction losses. Only one moving part, the sanding drum itself!

Ball bearing guide rollers front and rear insure ease of handling and uniform cut. The Reid-Way is instantly convertible from floor sander to bench sander or jointer.



Reid-Way Co.,
726 North 16th St.,
Cedar Rapids, Iowa.

Gentlemen: Please send me circular describing the Reid-Way Whirlwind Sander.

Name _____

Address _____

MOTOR TRUCKS *and* TRAILERS

The Truck Driver and His Truck

DRIVING, to the experienced truck driver, resolves itself into a series of movements which to him have become mechanical. One might say that driving to him is a habit and the operations of accelerating and gear shifting and braking at the proper time are accompanied by little actual thinking. Practice at the wheel and, above all, adherence to every rule promoting safety make a good driver. It is characteristic of the good driver that he is careful. He drives slowly compared with the beginner; he drives down steep grades in second or first speed; he turns slowly; he starts and stops gradually. All of the things that the experienced driver does are good for him, good for the other users of the road and good for the mechanism of the truck.

Driving up and down grades is, to the experienced driver, no more trouble than driving along a level stretch. There is no need to burn brake lining unnecessarily when going down grade. As a matter of fact many grades do not require the use of brakes at all, though most drivers use them. There are two forms of resistance which can be put into use to retard the motion of a truck, the brakes and the engine (when it is not firing).

The greater the engine speed when the engine is not firing the greater the resistance it offers so that if the gears are in second speed the car will roll down a hill more slowly than in high. In first speed, the speed will be slower than in second. The brakes should not be used on long grades unless the truck travels too fast in first speed. Then brakes may be called on merely as auxiliaries.

The next time you have occasion to travel down a steep grade shift into first speed, turn the ignition switch to "off" position and hold your foot on the brake pedal, but do not apply the brakes. You will find you have the truck under complete control and that the brakes will not do one-tenth the work they formerly were

called upon to do.

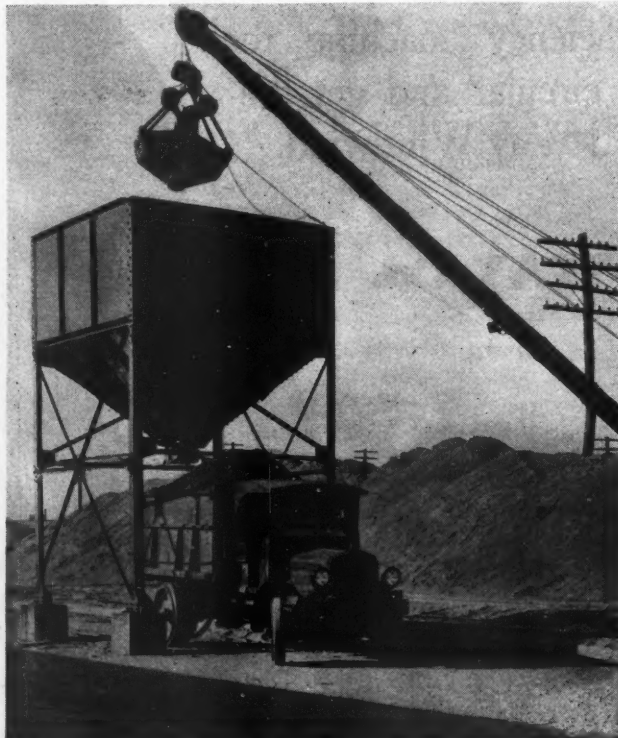
These, of course, are only a few ways in which a driver can intelligently care for his truck and reduce its operating cost. Let us first get the proper viewpoint on the care of the mechanical parts of the truck and then review some of those driving points that mean so much in reducing cost.

Truck Design and Engineering

It is impossible in such a brief space to discuss truck design. A careful study of your truck's instruction book will help to clear up many points which may be vague to you. For those who desire to make a more complete study of this, we suggest a study of "The Motor Truck Applied Mechanics for Owners and Drivers" by Edward E. La Schum, published by the U. P. C. Book Company, New York.

Study of a book such as this is of great value to a driver. It trains him to think of the various parts of a truck's mechanism and to know how his neglect to give these parts the care to which they are entitled, will result in high operating cost. Here, for example, is a list of questions which are typical of those which a driver should be able to answer and which can be easily understood after a brief study of truck mechanics:

1. What is the purpose of a radiator and water? How does the water do its work? Why is it necessary to keep the radiator full?
2. What different kinds of oil are necessary to good lubrication of a truck? Why does the cylinder require a different kind than the differential?
3. What change takes place in the cylinder when you advance the spark lever? Should you advance or retard the spark when the engine is working up to its limits, and why?
4. How many times does the piston go up and down in the cylinder every time an explosion takes place? What is the action of the



At Best the Contractor's Trucks Must Stand Up Under Hard Use and Adverse Conditions, and If the Drivers Are Not Trained to Handle Them Properly They Are Forced to Carry a Destructive Double Burden.

Why Not Save \$22 Out Of \$100

The American Mutual paid back to policyholders last year \$22 out of each \$100 that they paid for Workmen's Compensation or Automobile Insurance. For the past forty-two years, it has always paid back at least 20% of the cost of their insurance.

Compensation

Policyholders have saved thousands of dollars . . . and this, the strongest, largest and oldest mutual liability insurance company in the world has given them quick, efficient service.

In fact, American Mutual service is of such high quality that 96% of its policyholders renew their policies year after year.

Write for a representative list of our policyholders and let them tell you about American Mutual service, stability and saving.

Automobile

Dividends of never less than 20% mean a saving on automobile insurance — in addition, the American Mutual has helped policyholders prevent accidents.

The American Mutual has worked with truck fleets that have averaged one accident every 4,000 miles. Our engineers have instituted systems of safety that have improved these records to the extent that some fleets now average only one accident every 150,000 miles. Write for detailed information today.

AMERICAN MUTUAL LIABILITY INSURANCE COMPANY, 203 COLUMBUS AVENUE, BOSTON

American Mutual



To the American Mutual, 203 Columbus Ave., Boston

Please send me detailed information about American Mutual service and saving — particularly as applied to
☐ Workmen's Compensation, ☐ Automobile Insurance.

Name _____

Company _____

Address _____

MAIL THIS COUPON TODAY

► Write today for full information about this, the strongest, largest and oldest mutual liability insurance company in the world.

gasoline gas in the cylinder from the time one explosion takes place until the next one occurs? Why are the carburetor and intake manifold water-jacketed, and what advantage is gained by such construction?

5. What happens to the cylinder when the motor is run without water? Oil?

6. What happens when you are coasting down hill and suddenly let in the clutch?

7. Why is it not good to put on the brakes suddenly? If you do, what happens to the brake shoes?

8. What does running in car tracks do to the tires?

The questions are, of course, very elementary, but when answered satisfactorily indicate that the driver understands the principles of the internal combustion engine, and the why and wherefore of engine lubrication and cooling.

In other words, they enable him to picture to himself the reason why the wheels go round. The answers to these questions indicate that the driver can make a mental picture of just what happens in the mechanism of the car as he goes through the various routing motions of an average day's work. While sitting on his seat driving the car, his mind can look through the walls of the engine and imagine the pistons moving up and down and just what occurs during each of the four strokes of the engine. He can see the pistons reciprocating, and the connecting rods moving up and down, and see the crankshaft with the flywheel at the rear end revolving.

When he understands these simple motions he knows how the reciprocating motions of the pistons is transformed into the revolving motion of the crankshaft through the medium of the crank arm and the connecting rod. Tracing the power of the engine farther aft through the clutch, then the gear-set, and finally to the rear axle, he has a very good mental picture of just what makes the car run.

They also bring home the necessity of proper lubrication and proper engine cooling. Without sufficient water the engine overheats, thereby tending to neutralize the effect of the lubricating oil, and results in bearing wear and high gasoline and oil consumption per mile run. The proper answers to the questions regarding the advancement or retarding the spark lever when the engine is working up to its limit insures that the driver will get the most out of his engine and probably reduce the gasoline consumption considerably.

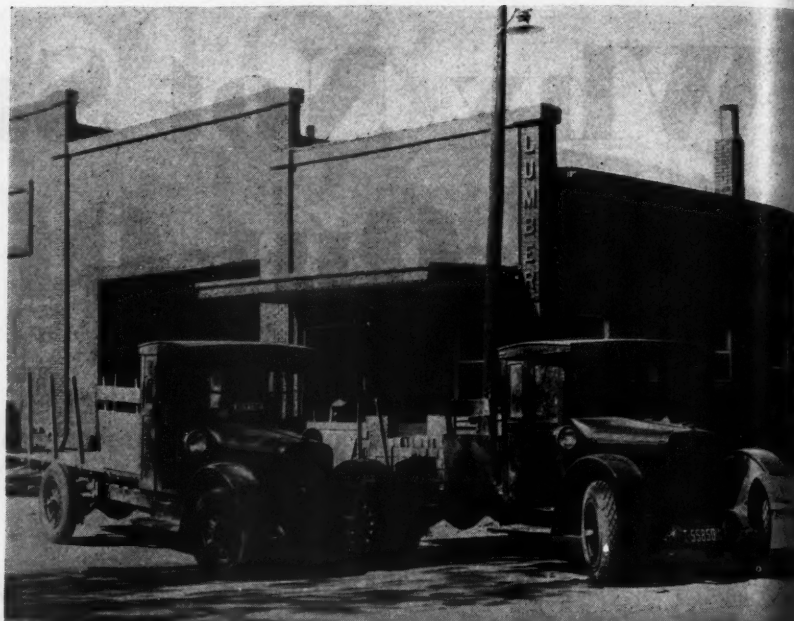


Saving Labor in Delivery of Building Materials

TWO low-hung $1\frac{1}{4}$ -ton speed trucks are proving very useful delivery units for the Jasper Lumber Company, Newton, Iowa. The trucks are utilized not only for hauling lumber but also much building material, such as brick, tile, cement, etc.

The fact that these trucks are built close to the ground and thus facilitate loading and unloading meets with special favor with this concern. It means that only one man takes care of the loading and unloading whereas two men were previously required to do the work with trucks equipped with higher bodies. The whole load is within the reach of the man unloading one of these trucks. Less lifting is required; this means much to the men, especially, in unloading the heavier building materials.

Newton is a lively manufacturing city. It is the biggest



These Trucks, Owned by the Jasper Lumber Company, of Newton, Iowa, Are of the Low-Hung ($1\frac{1}{4}$ -Ton Type) and Have Ably Met the Varied Demands of Hauling Lumber, Brick, Tile, Cement and Other Building Materials.

center in the world for making washing machines, four big plants being devoted to the manufacture thereof. The city has been growing apace and as a result much building has been going on. Deliveries of material for much of this building has been greatly speeded by the "safe and low" long-wheelbase trucks used by the Jasper Lumber Company, and shown in the illustration.



Instructions in Roof Framing

(Continued from page 68)

Problems

1. How many degrees in $1/10$ th of a circle?
2. A triangle has one angle 46 degrees, one angle 35 degrees. What is the other angle?
3. A roof is given as 35 degree pitch, with a span of 26 feet. Give the angle of the cuts in degrees and also the length of the rafter.
4. Figure the length of the rafter having a run of 16 feet and a pitch of 45 degrees.
5. One of the angles of a right triangle is 60 degrees. What degrees are the other two?

Answers

1. 36 degrees is $1/10$ th of a circle.
2. The three angles together equal 180 degrees. The two given angles equal $46 + 35$ or 81 degrees. The third angle is $180 - 81 = 99$ degrees.
3. The bottom cut will be 35 degrees; the top cut 55 degrees. The length per foot run is 1.220 feet. The length is $1.22 \times 13 = 15.86$ feet.
4. The length per foot run is 1.414 feet. The length is $1.414 \times 16 = 22.624$ feet or 12 feet $7\frac{1}{2}$ inches.
5. In a right triangle the one angle is 90 degrees. The other angle is $90 - 60 = 30$ degrees.



"Today's Practice in Concrete" is a new booklet published by the Portland Cement Association, 33 W. Grand Ave., Chicago, to answer the question, "Are Water-Cement Ratio Specifications a Success?" It illustrates, by actual examples, the advantages which have attended the growing use of the water-cement ratio for control of concrete.



Truck Tire *Improvements* that mean *Money* to You

Fully as great as the recent advances in passenger car tire construction are the improvements which Goodyear now offers in truck tires.

New peaks of truck tire ability result from these new betterments—new reaches in efficient and economical motor transport.

New and improved tread designs, for example, provide greater go-ahead tractive power on Goodyear Truck Tires. Stronger and tougher tread compounds set up a new measure of Goodyear resistance to wear.

Extra durable body stock and structure extend still farther the vitality of Goodyear Tires, already the record holders for long life at low per-mile cost.

You ought to know about these Goodyear achievements if you are an owner or user of trucks. Goodyear Truck Tire Experts are at your command for consultation on the *right* type and size of Goodyears for your vehicles. Your local Goodyear Truck Tire Service Station Dealer is equipped and eager to give you the standard Goodyear Service that backs up Goodyear Truck Tire quality.

GOODYEAR

Copyright 1929, by The Goodyear Tire & Rubber Co., Inc.

THE GREATEST NAME IN RUBBER

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

THIS IS
PATTERN
No. 621

HANGS LIKE
WALL
PAPER

Oil-Texd
New —

Reg. U. S.
Pat. Off.

**Permanent—
Textured—**

**Wall Covering
Most Serviceable**

Decoration Obtainable

Washable—Decorative—Easily Applied—Inexpensive—Built up in Linseed Oil—No Surface Cracks—Easily Repaired—Can be removed, permitting any other type of decoration.

The wall is finished in one operation without smudging the woodwork and a uniform texture is assured. Applied to any smooth surface like wall paper.

Made in any color and in a variety of designs suitable for any room in the home, public hall, stores, etc.

FREE SAMPLES and literature sent upon request.

Width of Roll 19½ Inches Trimmed

PRODUCT OF

Lincrusta-Walton Co.

Hackensack

New Jersey

NEWS of the FIELD



Sheet Steel Trade Extension Work is Expanded

TO assist in the extension work of the Sheet Steel Trade Extension Committee, the Gardner Advertising Company has been appointed as advertising counsellors in the general division, and the Griswold-Eshleman Company have been appointed as advertising counselors in the farm division.

Since the removal of the offices of the committee from Pittsburgh to Cleveland a very much augmented program of educational and extension work has been planned. This has necessitated a correspondingly broader use of advertising and research and is responsible for the announcement of the appointment of those advertising counsellors. There will be a continuous effort to develop the adaptability of each product to specific uses, in such a way that the articles made from sheet steel will continually represent a greater service to the public at large.

Following is a list of concerns which subscribe to and co-operate in the activities of the Sheet Steel Trade Extension Committee:

Allegheny Steel Co., Brackenridge, Pa.	Michigan Steel Corporation, Detroit, Mich.
The American Rolling Mill Co., Middletown, Ohio.	Newport Rolling Mill Co., Newport, Ky.
American Sheet & Tin Plate Co., Pittsburgh, Pa.	Newton Steel Company, The, Youngstown, Ohio.
Apollo Steel Company, Apollo, Pa.	Parkersburg Iron & Steel Co., The, Parkersburg, W. Va.
Central Alloy Steel Corp., Massillon, Ohio.	Reeves Manufacturing Co., The, Dover, Ohio.
Continental Steel Corporation, Indianapolis, Ind.	Republic Iron & Steel Co., Youngstown, Ohio.
Eastern Rolling Mill Co., The, Baltimore, Md.	Sharon Steel Hoop Company, Sharon, Pa.
Empire Steel Corporation, Mansfield, Ohio.	Weirton Steel Company, Weirton, W. Va.
Follansbee Brothers Co., Pittsburgh, Pa.	West Penn Steel Company, Brackenridge, Pa.
Granite City Steel Co., Granite City, Ill.	Wheeling Steel Corporation, Wheeling, W. Va.
Inland Steel Company, Chicago, Ill.	Youngstown Sheet & Tube Co., The, Youngstown, Ohio.



Reading Iron Office Moved

THE Reading Iron Company has announced the appointment of P. N. Guthrie, Jr., as vice-president and at the same time has announced that the general sales offices of the company will be transferred from Reading, Pa., to 30 Church St., New York City. Mr. Guthrie will have charge of sales and H. F. Mattern will continue as general sales manager.



To Handle Millers Falls Line

JOSEPH T. RYERSON & SON, Inc., with plants in Chicago, Milwaukee, St. Louis, Cleveland, Cincinnati, Boston, Buffalo and New York, has taken on the Millers Falls line of portable electric tools. This arrangement gives the Millers Falls Company, of Millers Falls, Mass., an excellent outlet for its product through a company which has handled high grade electric tools for years and is thoroughly organized for distribution in this field.



The LEADERSHIP that builds confidence in a product

CONFIDENCE of trade and public in a new and better method of applying paints and finishes is one of the important results of DeVilbiss leadership. When manufacturers, painters and finishers contemplate the adoption of the spray system they want to know that they and their customers will indeed receive valuable new benefits.

In designing, manufacturing and supplying spray-painting and finishing systems DeVilbiss has kept faith with all these various users. DeVilbiss systems do reduce the cost of painting and finishing and improve the quality of the result. In many cases DeVilbiss equipment renews the life of an entire industry by enabling the manufacturer to bring out his products in new and more attractive finishes not economically possible with other finishing methods.

There is no element of speculation in the

purchase of DeVilbiss spraying equipment for any task which it purports to accomplish.

The first DeVilbiss spray gun—20 years ago—was practical, serviceable, and dependable. It justified the hopeful courage of the painter who laid aside his brush and took up the new tool that modern engineering had provided for him. The confidence of users thus gained has never been misled. Succeeding and always improved models of DeVilbiss spray guns and outfits bring specific new benefits to all users of spray systems.

This conscientious effort, year after year, toward still greater improvement puts the DeVilbiss equipment today far in advance of the field. We will gladly tell you how this progress can be translated into practical benefits to you in your painting and finishing operations.

THE DEVILBISS COMPANY • 238 PHILLIPS AVENUE • TOLEDO, OHIO

**Sales and Service
Branches:**

NEW YORK
CHICAGO
PHILADELPHIA
ST. LOUIS
CLEVELAND

DeVilbiss

Spray-PAINTING FINISHING System

**Sales and Service
Branches:**

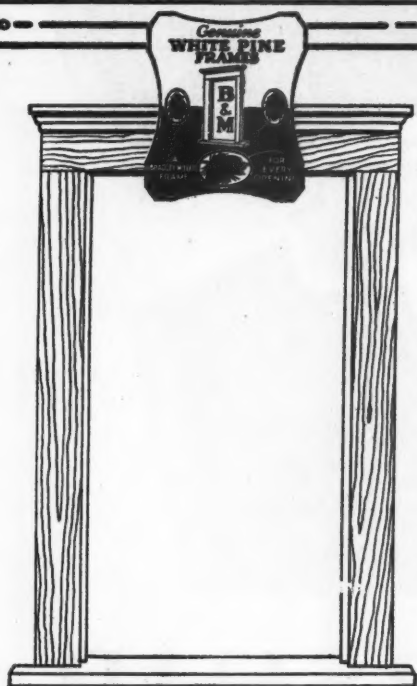
SAN FRANCISCO
DETROIT
INDIANAPOLIS
WINDSOR
ONTARIO

DIRECT FACTORY REPRESENTATIVES

DOES THE
WORK OF
FIVE MEN

IN ALL OTHER TERRITORIES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



A Better Frame That Gives Better Satisfaction

Put this Bradley-Miller Michigan White Pine Frame into your jobs. They are made of Michigan White Pine (*Pinus Strobus*), a durable wood found in centuries old New England homes.

Any carpenter can nail them up in less than ten minutes into the finest quality frame you ever saw.

You get **immediate** delivery on these Quality Frames. Your dealer carries them in stock for any size opening in the pattern you like, for any type of construction. Order now from your lumber dealer.

FREE

Catalog and Construction Booklet for Contractors, Builders and Dealers. Send the coupon today.

**BRADLEY
MILLER & CO.**
BAY CITY, MICHIGAN

BRADLEY-MILLER CO.
Bay City, Michigan

Gentlemen: Please send me your free literature.

Name.....
Address.....
Town.....State.....
Dealer's Name.....
Address.....

Sawler Offers New Slogan for Lumber Dealers

THE trademark slogan illustrated here was recently offered to the National Retail Lumber Dealers' Association by William D. Sawler, advertising manager of the Morgan Woodwork Organization, as a substitute for the trademark now being used by the association. Referring to this slogan, Mr. Sawler says:

"This design was submitted to the National Retail Lumber Dealers' Association as more fitting for national publicity than the present Keystone design with the slogan, 'Build Now with Safety.'"



This Design for a Trade Mark Slogan Has Been Offered to the National Retail Lumber Dealers' Association by William D. Sawler, Popular Advertising Manager of the Morgan Co.

"This design, though very simple, should be very powerful in its appeal to create the desire for home ownership. It reflects all that wonderful, sentimental thought contained in Payne's immortal song, 'Home, Sweet Home.' The words, 'There's no place like home,' are known to every man, woman and child in this country and are cherished by every American. There is a decided urge to action in the foot line, 'Build Now!' In short, the wording is full of meaning, simple, attractive, forceful and universally adaptable.

"It is the opinion of the designer that this mark is perhaps one of the most fitting for the lumber industry because over the last few generations the wording has been instilled into the consciousness of the masses and it really amounts to a made-to-order slogan that would cost about one-tenth as much to promote and put across as the slogan lacking this forcefulness.

"Numerous dealers throughout the country have commended this design, many stating that it appealed to them more than anything they had ever seen offered for the purpose. In fact, many dealers have already adopted it for their own use."



Overhead Door Plans Campaign

THE Overhead Door Corporation, Hartford City, Ind., has appropriated a large sum of money to tell the story of the "Overhead Door" to the consumer in 1929. For the first time in the history of merchandising a garage door has achieved the dignity of a national advertising campaign. A liberal part of the appropriation will be used in the leading publications of the trade, insuring a complete coverage of the building field.

**STEPHEN
ALTEN** *Made* **\$225.00**

with the

AMERICAN HIGH PRODUCTION FLOOR SANDER

**Just During the Time It Took Him to
Use the Sample Sheets of Abrasive
Paper That Came With the Machine**

Here's His Letter—

Gentlemen:

Since receiving your new High Production Floor Sander, I have turned out three times the amount of work as with my previous machine. I made \$225.00 from the samples of abrasive paper that came with the machine.

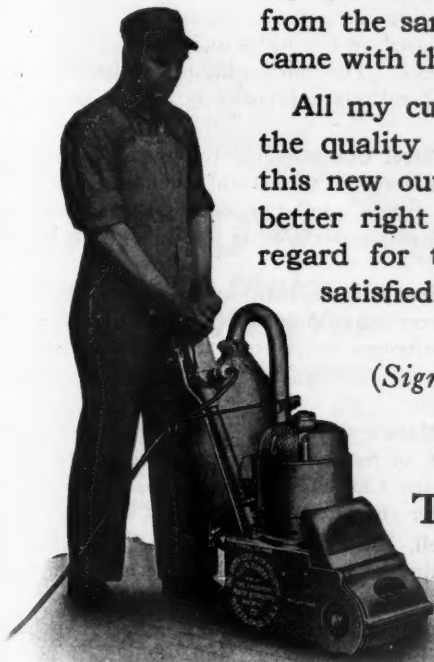
All my customers congratulate me on the quality of work that I can do with this new outfit, and business is getting better right along. I have the highest regard for this machine and am well satisfied in every way.

Yours truly,

(Signed) **STEPHEN ALTEN,**
Avon, Ohio.



"Easily Carried by One Man"



**There Are DEFINITE REASONS Why It Will
Pay You Well To Own An AMERICAN
HIGH PRODUCTION Floor Sander
—Mail The COUPON For The Facts**

Mail It Today!

A Product of

**The AMERICAN
Floor Surfacing Machine Co.**
515 So. St. Clair St., Toledo, Ohio

Branches in Principal Cities

CANADIAN REPRESENTATIVES:

The A. R. WILLIAMS MACHINERY COMPANY, Ltd.
Toronto Winnipeg Montreal St. Johns
 Vancouver Calgary

THE AMERICAN FLOOR SURFACING MACHINE CO.
515 So. St. Clair Street, Toledo, Ohio

Gentlemen: Please send me facts about your High Production Floor Sander, also price and complete information, without obligation to me.

NAME

STREET

CITY.....STATE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Cabot's

You Want Insulation That Lasts



House on Portland Heights, Portland, Oregon.
Cash and Wolf, Architects, Harry Phillips, Contractor.
Roof of Cabot's Creosote Stained "Shakes." Exterior Woodwork
finished with Cabot's Creosote Stains, Insulated throughout
with Cabot's Quilt.

Of course you intend to insulate those new homes you are building.

Make sure you use insulation that will work just as well the tenth winter as the first.

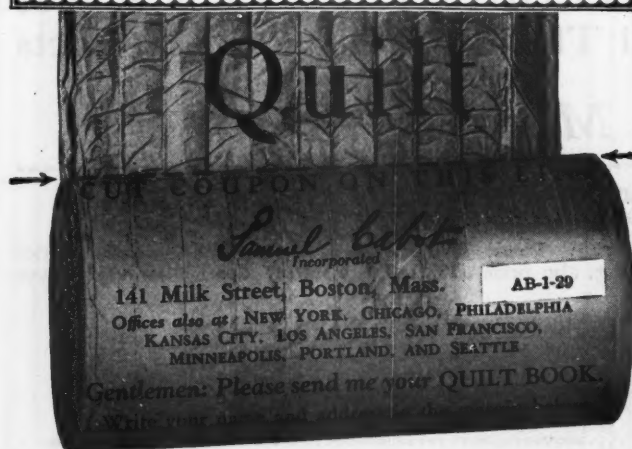
Cabot's Quilt was first made and sold in 1892—36 years ago. And Quilt installed at that time has been recently found unchanged in insulating value,—rot-proof and vermin-proof. Cabot's Quilt does not gradually pack down—it stays fluffy and useful.

Insulate with

Cabot's Quilt

Time-Tested Since 1892

[Send in the coupon (Roll of Quilt)
below for full Quilt information.]



Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Patents and How to Obtain Them" is the title of a booklet published by Watson E. Coleman, patent lawyer, 724 Ninth Street, N. W., Washington, D. C., for the guidance of inventors.

"Real Estate Financing," by Nelson L. North, DeWitt Van Buren and C. Elliott Smith, published by Prentice-Hall, Inc., 70 Fifth Ave., New York City, is an authoritative and comprehensive handbook covering the entire field of real estate financing including the legal, operative and technical phases of the subject and containing numerous forms used in all types of financing. It should be valuable as a ready reference guide to all those concerned with real estate financing. Price \$6.

"Practical Estimating for Painters and Decorators," by William P. Crannell, published by Frederick J. Drake & Co., Chicago, is described on the title page as "A complete Text-book, Covering All the Process and Elements of an Estimate for Painting and Decorating." It is in two parts, Part I being devoted to "Arithmetical Processes" and Part II to "Complete Jobs of Estimating." Price \$2.

"Plumbing Questions and Answers," by Joseph E. Taggart, published by the Scientific Book Corporation, 15 E. 26th St., New York City, is described as a book of "Useful Information for Master and Journeyman Plumbers, Sanitary Engineers, Plumbing Inspectors, Architects, Estimators and Draftsmen, Based on the Rules and Regulations of the City of New York." The third edition has been revised and enlarged and entirely reset and is offered in pocket size. Price \$2.

The Concrete Steel Company, 42 Broadway, New York City, offers a new booklet, "Structural Economies for Concrete Floors and Roofs," and two data sheets, No. 1 and No. 2, on "Construction Details for Installing Havemeyer Trusses."

The Duro Company, Monument Ave., Dayton, Ohio, has published two very handsome new booklets under the titles, "Water Softeners by Duro" and "Water Systems by Duro" which are catalogs of this company's products in these two lines.

The Georgia Marble Company, Tate, Ga., offers sheets XXIX and XXX of its series of detail sheets, which feature the Lackawana Church, of Lackawana, N. Y., one of the few all marble church exteriors in this country.

Harvey Hubbell, Inc., Bridgeport, Conn., has published a bulletin presenting its new pull socket, the latest improvement in this company's 32 years of socket design.

The Erie City Iron Works, Erie, Pa., offers two booklets, "Erie City Economy Boiler" and "Erie City Return Tubular Boilers," which are complete catalogs of these two products.

The Philadelphia Building Congress, 705 Otis Bldg., Philadelphia, Pa., has published a pamphlet, "Year-Round Construction Facts," designed to stimulate winter building.

The Macomber Steel Co., 909 Belden Ave., Canton, Ohio, offers its new catalog No. 612, of "Massillon Pivoted Steel Windows—Stock Size Steel Doors—Designing Data and Erection Details."

The National Lumber Manufacturers' Association, Transportation Bldg., Washington, D. C., is distributing a large bulletin describing its advertising program and reproducing some of the advertisements which it is publishing from month to month.

FREE BLUE PRINTS

AND FREE BOOK "HOW TO READ BLUE PRINTS"

Show You The Way To

9 BIG PAY JOBS

- | | |
|---|--|
| 1 Building Superintendent—\$5,000 to \$12,000. | 6 Building Estimator—\$6,000 to \$10,000. |
| 2 Building Inspector—\$4,800 to \$8,000. | 7 Real Estate Expert—\$5,500 to \$12,000. |
| 3 Appraiser—\$6,000 to \$10,000. | 8 Construction Foreman—\$4,500 to \$8,500. |
| 4 Material Buyer—\$5,000 to \$7,500. | 9 CONTRACTOR AND BUILDER IN A BUSINESS OF YOUR OWN—\$5,000 to \$12,000. |
| 5 Material Salesman—\$5,000 to \$12,000. | |

FIND OUT HOW
Easy it is to Make
\$4,500 to \$12,000 a Year

Learn to read Blue Prints this amazing new way. See how quickly and easily you can train to make \$4,500 to \$12,000 a year! My FREE Blue Prints and big FREE Book, "How to Read Blue Prints," disclose all the so-called "mysteries" of Blue Print Reading—also give some startling facts about the nine best jobs in America—jobs open only to men who can read Blue Prints. Don't send one penny—just mail the coupon!

NO longer need you spend years trying to pick up the "mysteries" of Blue Print Reading—for now a quick, sure practical method has been perfected that has made thousands of men Blue Print Experts in a surprisingly short time.

THE SECRET OF BIG MONEY

This is no ordinary "school course." It is practical from start to finish. It is based on many sets of real Blue Prints—plans that would cost thousands of dollars if purchased from the architects. Twenty famous experts in all lines of construction work talk over these Blue Prints with you in plain, simple language. Show you every detail. Explain every short cut. Tell you the "secrets" of quick, accurate estimating. Explain superintending. Give you for the first time many inside facts and money-making methods used by the "giants" of the Building Industry.

IF YOU LIVE NEARBY

Visit our big day or evening school attended by over 1,000 Builders. You can get the same training at home by mail—same plans, lessons and instructions. Your spare time is enough.

NO EDUCATION NEEDED

This is the kind of training that quickly puts men into \$4,500 to \$12,000 a year jobs—or into profitable contracting businesses of their own. Yet now you get it right at home in only 2 or 3 months. It requires no extensive education. If you can read and understand what is written here you can easily master it.

See what this training has done for others: Bartholomew, Calif., became a contractor at an increase of over 300% his first year; Blair, Okla., stepped up to Superintendent at 100% increase; Dickerson, R. I., increased his salary 700% in 12 months; Marchand, La., says: "My income has increased 200% and I now have more contracting work than I can do."

AMAZING OPPORTUNITIES

Over seven billion dollars will be spent this year in new construction! No wonder, then, such tremendous opportunities are open to you when you have this "head-work" training in Blue Prints.

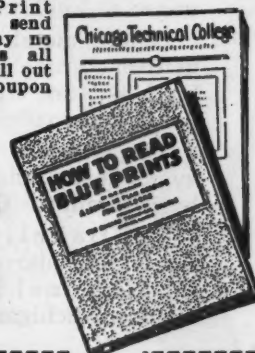
If you want more money—real big money—then choose a "Blue Print" job in Building. Here is the one field where there are unlimited opportunities for advancement.

MAIL COUPON TODAY

So accept by FREE gift of a complete set of real working Blue Prints and my

fascinating Book "How to Read Blue Prints" that tells all the interesting and instructive facts about Blue Print Plans. Don't send one penny—pay no C. O. D.—it's all FREE. Just fill out and mail the coupon today—NOW!

TWO BOOKS also FREE



Chicago Technical School for Builders,
Dept. A-122, Chicago Tech. Building,
118 East 26th Street,
Chicago, Ill.

Please send me your free book, "How to Read Blue Prints," and complete set of real Blue Prints. I understand these are mine to keep without obligation. It is also understood that no salesman will call on me.

Name.....

Address.....

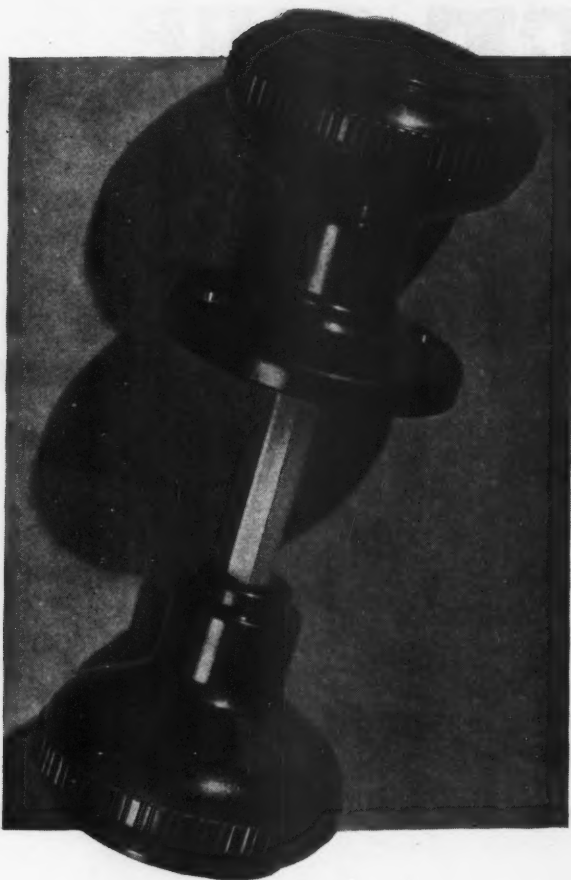
City..... State.....

Chicago Technical
SCHOOL for BUILDERS



Dept. A-122, 118 East 26th St., Chicago, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Color and finish of *Bakelite Molded Door* Knobs are lasting

THE color and finish of Bakelite Molded door knobs will last a lifetime. They are built to withstand severe service under all kinds of climatic conditions.

Unlike metal, Bakelite Molded can neither corrode nor rust. It is strong and hard, but not brittle. It never requires polishing or refinishing.

The standard colors and finishes now available are polished black, dead black and burled walnut. Other colors are special.

The Bakelite Molded Door Knobs illustrated above were manufactured by the National Brass Company of Grand Rapids, Michigan.

BAKELITE CORPORATION
247 Park Avenue . . . New York, N. Y.
Chicago Office . . . 635 W. 22nd Street
BAKELITE CORP. OF CANADA, LIMITED
163 Dufferin Street . . . Toronto, Ontario

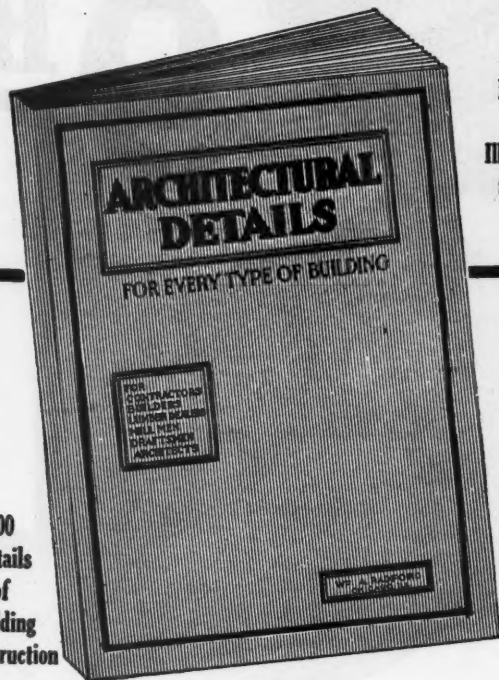
BAKELITE

THE MATERIAL OF  A THOUSAND USES

*The registered Trade Mark, and Special design above may be used only on products made from materials manufactured by Bakelite Corporation. Under no circumstances may the name, or initials, or emblem, be used to imitate the design or to represent the name of Bakelite Corporation or its products.

THIS BIG BOOK FREE!

with your New or Renewal Subscription
to **AMERICAN BUILDER**



160
Pages
of
Illustrations

500
Details
of
Building
Construction

"ARCHITECTURAL DETAILS" is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

How to Get Your Free Copy

Send in your new or renewal subscription for one year at the regular rate of \$2.00 and we will send you "ARCHITECTURAL DETAILS" absolutely FREE, postpaid.

Offer good in U. S. and Canada.
Add \$2.00 to Foreign Countries.

USE THIS COUPON FOR YOUR ORDER

THE AMERICAN BUILDER A.B. 1-29
1827 Prairie Ave., Chicago, Ill. 1927

Enclosed find \$2.00 for which Enter my subscription to
The American Builder for one year and send me free and
postpaid, a copy of your book, "Architectural Details."

Name.....

STREET OR.....

BOX No.

P. O. STATE.....

My occupation is (Check Only One)

☐ Dealer ☐ Builder ☐ Architect ☐ Real Estate ☐ Miscellaneous



MODERN STORE FRONTS

THAT'S WHY THEY'RE SO EASILY SOLD

Prospects by the hundred right on the main business streets of your city. Druggists—grocers—bakers—haberdashers—department stores and many more all interested NOW in modernizing their store fronts to keep abreast of the times. You'll find a decided preference for the modernized ideas as expressed in Kawneer Bronze Store Fronts.

SPECIALIZE IN STORE FRONT CONSTRUCTION

There's plenty of business that will come your way and a sure profit from every job. If interested, mail the coupon and we'll send book entitled "MODERN STORE FRONTS FOR BETTER DISPLAY"

THE KAWNEER COMPANY
1026 FRONT ST., NILES, MICHIGAN
Send me booklet "MODERN STORE FRONTS
FOR BETTER DISPLAY." I'm interested.

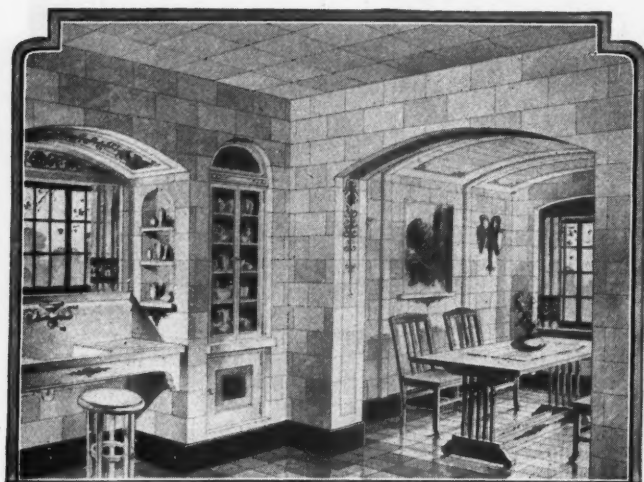
Name _____
Address _____
City _____ State _____

Kawneer

BRONZE
STORE FRONTS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

SANI ONYX A VITREOUS MARBLE



Something really new in Wall Material

SANI ONYX is the *coming* material for walls, ceilings, wainscoting. It may be used either in new buildings, or in modernizing old ones.

SANI ONYX is a material of rare beauty. It makes possible new surface textures and color combinations—bright, modern, exquisite.

And SANI ONYX wears like solid stone! Indeed it is fused from rock ingredients and tests 40% harder than marble. Does not crack, chip, check or discolor.

May be used for interior or exterior work. Sanitary; unaffected by climate; easy to clean and keep clean.

And the cost is less than you think!

MARIETTA MANUFACTURING COMPANY

80 Brookside, Indianapolis, Indiana



Get This Book

Let us send you a book telling the SANI ONYX story and picturing actual installations in full color. It is free, of course.

SPEED

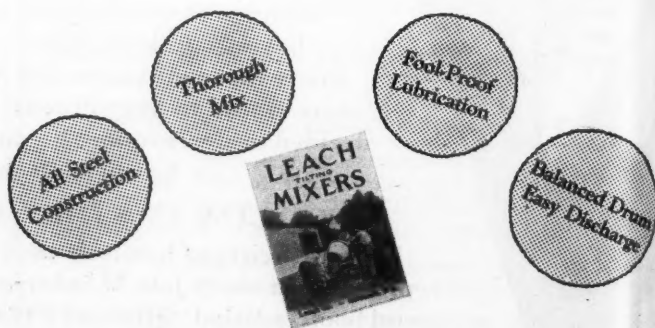


**HANDLES BATCHES FASTER
AND IT IS BUILT TO LAST LONGER**

SPEED and durability—they are combined in this Leach Tilter Trailer. Think of what this means in extra daily yardage plus longer mixer "life."

This 1/2 bag mixer is rigidly built of all-steel—has generous drum—no corners, discharges clean. Long has the Leach Mixer been outstanding for its sturdy construction.

Note its clean appearance and design—this mixer will give you longer years of service—continuous, profitable service.



Let us send you a copy of our Tilter catalog which describes and pictures all Leach Tilting Mixers. Write for it today.

LEACH MIXERS
OSHKOSH WISCONSIN

MOST GALLONS PER DOLLAR



No. 250 Fresh Flow Water System, 250 gallons per hour. Only \$69.50 f. o. b. Dayton.

DURO

The Popular Choice of Builders Everywhere!

The name Duro is known to builders everywhere. It means the ultimate in satisfactory water service. Duro water service is uniform and uninterrupted—patented features assure care-free operation. Duro water service is economical—the first cost is low, due to mass production, and the operating cost is but one or two cents per day. Only Duro, world's largest maker of pumps and water systems could offer so much value at so little cost.

The factory-trained Duro expert in your locality is always ready to help you on any installation. Send in the coupon below for a free copy of the new Duro Catalog. Please state whether you are a builder or a contractor. "Buy D U R O—without a fault."

THE DURO COMPANY

101 Monument Ave.

Dayton, Ohio

DURO

Automatic Water Systems

Send for NEW CATALOG

THE DURO COMPANY,
101 Monument Ave., Dayton, Ohio.

AB-1

Please send me the new Duro Catalog.

Name.....

Street.....

City..... State.....

BUILD FRIENDS AS WELL AS HOUSES. WITH THRUSH SYSTEM



HOME buyers know the importance of a good heating plant. Wise ones look in the basement first. Modern heating means comfort, convenience and health itself. Thrush automatically controlled Hot Water Heating fulfills the wishes of the most careful buyer. It's nationally advertised.... they know it by name. Thrush Regulation is an added selling point that will make many sales and help you get better prices. Mail the coupon now.

H. A. THRUSH & CO.

PERU, INDIANA

Clip This Coupon

H. A. THRUSH & CO.,
Dept. B, Peru, Indiana
Send booklet, "Which Heating Plant for my Home?" and tell me more about Thrush System of Hot Water Heating

Name.....

Address.....



THRUSH

SYSTEM

OF HOT WATER HEATING

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Sana-bestos Tiles

PATENTED

for

*Homes, Apartments,
Schools, Churches,
Stores and Hospitals*

are:

**DURABLE
ECONOMICAL
COMFORTABLE
CLEAN**



Sana-bestos Floor Tiles offer an attractive proposition to builders and contractors everywhere, because of their moderate cost, beauty and permanence.

Whether you are building on speculation or contract, Sana-bestos Floor Tiles will answer every question you may ask about a flooring.

Inexpensive: Moderate first cost, no upkeep expense.

Easily and Quickly Applied: Over any new or old sub-floors by an average workman.

Durable: Sana-bestos Tiles are non-dusting, fire, water and acid-proof. They preserve their fresh appearance through years of terrific wear.

Sanitary: No waxing or oiling—simply wash with water.

Comfortable: Easy to the tread, resilient, non-slippery, noiseless.

Distinctive Appearance: A variety of rich colors that harmonize with any artistic layout, including Black, Maroon, Red, Brown, Green. (Sana-bestos Tiles cannot be made in light colors.)

Guarantee: A uniformly standard product. Every shipment tested and inspected.

*Sample tile and descriptive literature
sent upon request*

FRANKLYN R. MULLER, Inc.

Manufacturers of Asbestone and Sana-bestos Tiles

201 Madison St.

Waukegan, Illinois

Established 1906

WILLIS Skylights

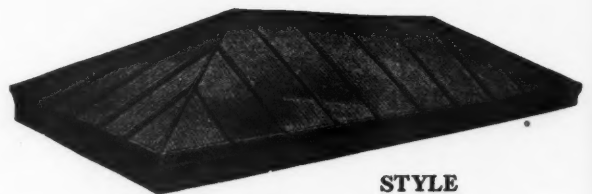
Give Maximum Light
—with—
Perfect Ventilation

Thirty years ago Willis skylights were crude affairs compared with the finished product of today. Now, there is light galore and an abundance of ventilation; a world of strength with no danger of sagging, buckling or bending. These are for the building owner.

For you, there is a masterful product, cut and trimmed to minute perfection. And one thing reflected in the product, but not in the price, is the fact that every Willis skylight is completely assembled, and then taken apart, before packing for shipment. This guarantees for you a speedy, trouble-proof, money-making erection job by an untrained mechanic with a screw driver and hammer.



**STYLE
No. 70S**



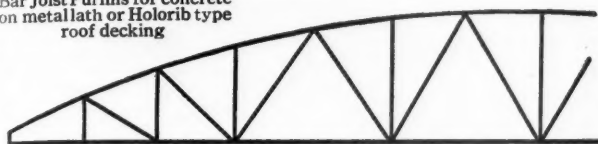
**STYLE
No. 10S**

Standard and special sizes. Send your specifications for estimates. If you do not have our big catalog on sheet metal products, write for it today. It is free to you.

WILLIS MFG. CO.
Dept. 128 GALESBURG, ILL.



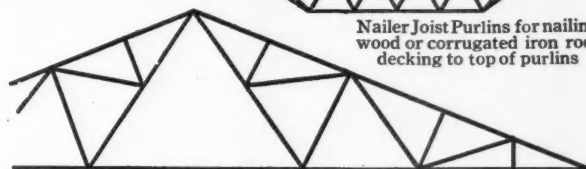
Bar Joist Purlins for concrete
on metallath or Holorib type
roof decking



Massillon Curve Chord Trusses



Nail Joist Purlins for nailing
wood or corrugated iron roof
decking to top of purlins



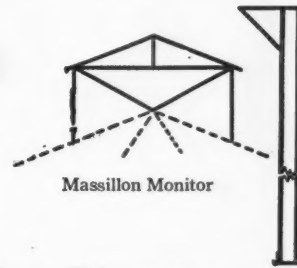
Massillon "A" Type Trusses



Massillon Monitor

Steel Construction

*for Commercial and Industrial
Buildings, Airplane Hangars
and Garage Buildings*



Massillon Monitor

"H"
Columns

STEEL insures **STRENGTH** and **SECURITY** where "Massillon Standardized Steel Building Products" are used. The standardization of these products invariably speeds up the completion of the building and results in lower costs.

As an example of this standardization, standard stock size roof trusses are provided for all loads for spans up to 100 feet. In a similar manner, standard stock size purlin sections are provided

for all types of roof deckings. Shipments are always prompt.

The contractor who builds with Massillon products has every advantage of the "standard steel building" plus the fact that these standardized products can be provided to meet the individual requirements of his client.

Send us a sketch or set of plans for your next building of this type and let us show you how Massillon construction can benefit you.

"H"
Columns

THE MACOMBER STEEL COMPANY, 909 Belden Avenue, CANTON, OHIO

**The New Way
TEN TIMES FASTER**

The OLD WAY

POWERFUL-DURABLE-SAFE

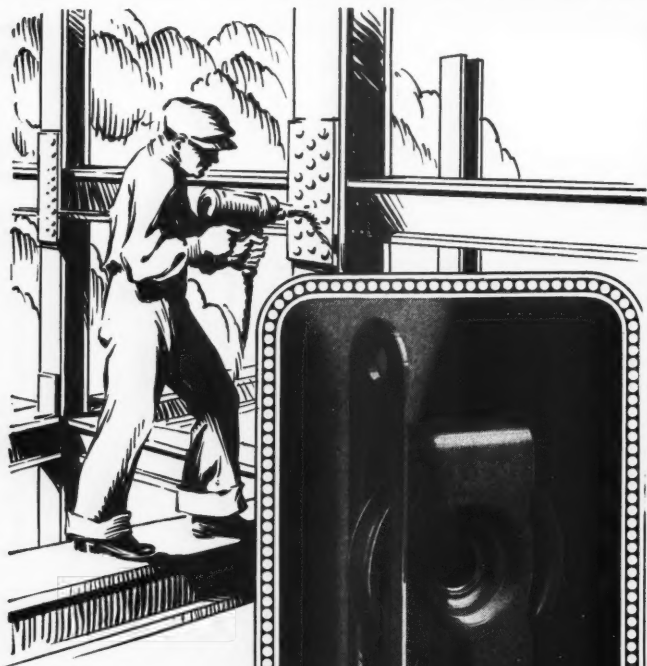
The ALTA Electric Handsaw is SAFE. That's IMPORTANT!

Please demonstrate on my job—

Name.....
Address.....
City & State.....

WAPPAT
GEAR WORKS, INC.
7526 Meade Street
PITTSBURGH, PA.

**ALTA
ELECTRIC
TOOLS**



The
STRENGTH
and PERMANENCE of
modern construction are
exemplified in Grand Rapids
All-Steel Sash Pulleys —

Strength and permanence are as characteristic of Grand Rapids Hardware Pulleys as they are of modern skyscraper construction.

Experience has definitely proved that they will stand more wear than will occur in the average life of a building.

Their All-Steel Construction eliminates breakage—replacement—waste.

They are guaranteed to carry any weight that can be suspended by a sash cord or chain.

Guaranteed to be perfectly uniform—to always fit the mortise.

More than 20 models to choose from—Ball Bearing, Cone Bearing and Axle Bearing types.

Sold at the price of ordinary pulleys by leading jobbers everywhere.

GRAND RAPIDS HARDWARE CO.

556 Eleventh St.

Grand Rapids, Michigan



How to Cure Sick Fireplaces

SICK fireplaces—those that give off smoke and soot, or won't draw properly, can often be remedied at little or no expense, if the builder has a thorough understanding of the causes of fireplace ills. Frequently, this knowledge saves many dollars.

The Donley Book of Successful Fireplaces might well be classed as a medical treatise on fireplace ills. It tells what causes fireplace troubles and how to remedy them. Better than that, it gives complete plans and details which, if closely followed, will prevent all fireplace evils.

This book also gives many beautiful fireplace designs for living rooms, dining rooms and bed rooms, worked out in many materials. If you are building fireplaces you should know how to cure fireplace ills. A copy of this valuable book will be sent upon receipt of 25c to cover cost of mailing.

The Donley Brothers Co.
13910 Miles Avenue • • Cleveland, Ohio





The New Knickerbocker Tilter

An unusually fine Tilter of Trailer Type, this machine is manufactured and sponsored by Knickerbocker—designers and builders of first quality mixers since 1903.

Its performance in the field under a variety of trying conditions clearly indicates that this new Tilter is meeting every Knickerbocker standard.

Drum bottom is one solid piece of semi-steel. Its unusual design and the shape and placement of the mixing blades (four of them) increase the capacity and provide a mixing action similar to Knickerbocker non-tilters. The drum is perfectly balanced, quickly and easily tilted and can be locked in any position. Mixing action is fast, thorough and can be seen at all times. Timken Thrust Bearings and Dot lubrication completes the picture of this outstanding Tilter.

It's built for hard work, flexibility and long life.



3 1/2 S Trailer Type

Our illustrated bulletin describing this mixer, together with prices, will be gladly sent upon request.

The Knickerbocker Co.
Jackson, Michigan

sawing

with the new Junior Wodack electric hand-saw is the quickest way to cross-cut or rip a board accurately and safely with the least effort. This Wodack saw weighs only 15 lbs., operates from any light socket, cuts 2 5/8" and is built to saw any wood, anywhere for 2¢ an hour. The price is \$95. Sign and mail the coupon for a demonstration on your own work. ▲ ▲ ▲ No obligation.

▲ ▲ F. L. ROGERS & CO. ▲ ▲
23 South Jefferson Street, Chicago



*There are three other
Wodack saws which
cut up to 4 1/2"*

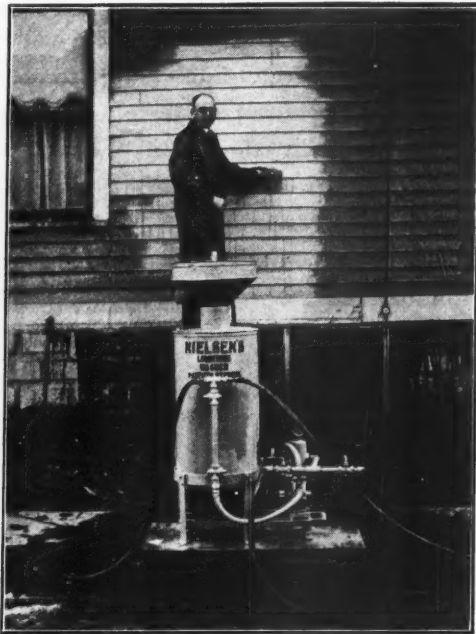
I want to try this saw on my own work. Tell me how I can see it.

name _____

address _____

A B

\$20⁰⁰ A DAY IN PROFITS!



NIELCO Lightning Washer
Patented and Patents Pending

This operator is working on a frame house of 1612 sq. ft. surface. With a helper he cleaned the house in 8 hours for a contract price of \$35. Made \$18.25 clear above wages for himself and helper, sales cost and cleaning compound.

Operating from 6 to 8 hours per day, two men can pay themselves good wages and in addition earn a \$20 dividend on their investment in a

NIELCO Lightning Washer

the only equipment in existence for washing every type of building and for performing a score of other cleaning operations. NIELCO Cleaning Compound—harmless to hands, paint, lawn, clothing and shrubbery—removes dirt rapidly. Process five times faster than hand scrubbing. Countless buildings must be washed before painting. Others, when washed clean, do not require painting. The NIELCO Washer does the work so well and so fast that your services will always be in demand. Easy to build up a profitable year-round business.

Here Are the Opportunities

Washing buildings of frame, terra cotta, stucco and glazed brick, windows, skylights, signs, automobiles, boats, railway cars, steel bridges, garage floors, grease pits, basements, cleaning sewers, radiators, hot water coils, spraying whitewash, stain, disinfectant, germicides.

Act Quickly to Secure Territory

Local operators are being licensed in exclusive territory, protected from competition. Establish yourself in this new business before some quicker fellow secures the valuable NIELCO franchise in your town. We guarantee both machine and cleaning compound and help you get business.

Write or Wire for Exclusive Territory Proposition

NIELCO

Division of Consolidated C. M. Corp'n.
911 East Beecher St., ADRIAN, MICH.



Fine Brick Effects with this **COLORFUL FACE BRICK**

The excellent brick treatment shown in the doorway illustrated here is enhanced through the use of Forestblend Face Brick. This facing has a great range of natural colors and a unique rough-hewed texture secured by a patented method of manufacture. You will be interested in the effects to be secured through Forestblends. They have the color you want as well as an unusual texture of fine character.

Contractors who build either to rent or for resale will appreciate the value of Forestblend face brick in closing sales. Houses faced with Forestblends rent or sell quickly. Their appearance invites occupancy. Send fifty cents today for the Finzer plan book "Beauty in Brick." It contains illustrations of many easy-to-sell homes. Plans for these homes are available at very reasonable cost.

The Finzer Bros. Clay Co.
Dept. E
Sugarcreek, Ohio

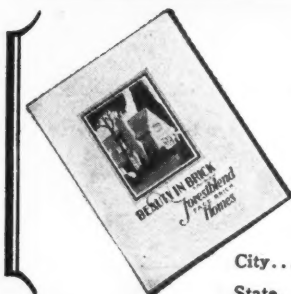
Gentlemen:
Enclosed find fifty cents for which please forward your new 1929 Plan Book.
Yours very truly,

Name.....

Street.....

City.....

State.....



THE FINZER BROTHERS CLAY CO.
Members American Face Brick Association
SUGARCREEK, OHIO

forestblend
FINZER FACE BRICK
Reg. U. S. Pat. Off.

SUPREME COURT

Decision of Vital Interest to Manufacturers and Purchasers of Genuine Mahogany Trim

ARCHITECTS specifying genuine Mahogany for interior trim or doors are now in a position to prevent substitution of other woods, and manufacturers of interior trim and builders are afforded adequate and effective protection from the unfair competition of trim or doors made from substitute woods but sold as and for Mahogany or under names of similar import, by decision of the United States Supreme Court handed down October 15, 1928.

In this decision the United States Supreme Court denied petition for writ of certiorari in the so-called "Philippine Mahogany case", thus leaving undisturbed the order of the Federal Trade Commission as affirmed by the Circuit Court of Appeals, Second Circuit, New York. The order of the Commission, which is now enforceable, restricts the name "Mahogany" or any name of similar import to lumber or wood products derived from trees of the Mahogany or Meliaceae family. The order specifically prohibits the use of the name "Mahogany" or "Philippine Mahogany" or any name of similar import as applied to hardwood lumber of the Philippine Islands or any product made therefrom.

Genuine Mahogany is available in ample quantities and costs little more than birch, gum or oak and is much cheaper than walnut. Mahogany warps and shrinks less than any other wood. It retains its color and lustre and improves with years of hard service; it never becomes shabby. A fine building deserves a fine interior. There is no more beautiful and appropriate treatment for hotel and residence than painted trim with Mahogany doors, or in office buildings Mahogany doors and trim. In your specifications insist upon genuine Mahogany.

MAHOGANY ASSOCIATION, Inc.
1133 Broadway New York

A National Organization of Mahogany Producers



K-V
Clothes Closet
Fixtures

Ask your Dealer

No builder can construct a small home these days without building small clothes closets. And yet families must have enough storage room. The K-V Clothes Closet Fixture doubles the capacity. It is easily installed to the underside of the full closet shelf. It is liked by thousands of housewives because it keeps clothes in shape, creates order, is convenient, discourages moths, and can't get out of order.

The K-V. Clothes Closet Closet Fixture is made in sizes from 12 to 60 inches in multiples of 2 inches. It has been endorsed by leading builders and leading builder's magazines, as you will notice if you will refer to the floor plans shown in this journal.

Ask your dealer for K-V Clothes Closet Fixtures. He can supply you.

Figure them in your building plans. Experience shows they help sell homes.

KNAPE & VOGT MFG. CO.

650 Richmond St.

GRAND RAPIDS, MICHIGAN

Send me your booklet and full information regarding K-V Clothes Closet Fixtures, how I can save money in construction costs and how they help sell homes.

Name.....

Address.....

IF
your dealer
cannot
supply you.
**Write us
direct!**

"ANTI-HYDRO" Prevents Brick Mortar from Freezing in Cold Weather

The brick masonry in this building was laid during freezing weather with the aid of "Anti-Hydro."

In addition to preventing the mortar from freezing, "Anti-Hydro" made it permanently waterproof and prevented the possibility of efflorescence. "Anti-Hydro" does all this for you—in one operation and at one cost.

"Anti-Hydro" is an easy-to-use liquid compound which permanently waterproofs and hardens all portland cement mixtures. It lowers the freezing point of concrete to 15 degrees F. Enables you to work right through the winter, without the usual cold weather delays and penalties for uncompleted contracts.

To use "Anti-Hydro" simply add it to the water used to wet down the mix. Any unskilled laborer can do it. Results are guaranteed.

For 24 years "Anti-Hydro" has been known for its faithful performance. Use it on your next job.

ANTI-HYDRO
FOR PERMANENT CONCRETE
HARDENS WATERPROOFS



ANTI-HYDRO WATERPROOFING Co.

265-295 Badger Ave.

Newark, N. J.

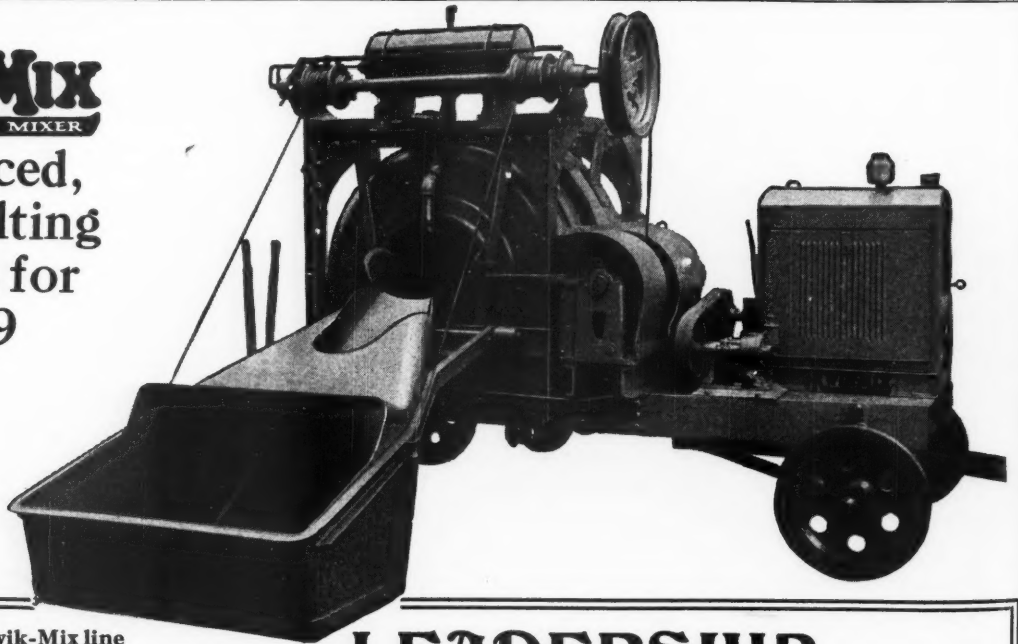


PILGRIM LAUNDRY ADDITION
BROOKLYN, N.Y.

OSCAR P. CADMUS : ARCHT.
CAULDWELL-WINGATE CO. : CONTR.

Kwik-Mix
CONCRETE MIXER

Advanced,
Non-Tilting
Models for
1929



See the complete Kwik-Mix line
on exhibition at the Good Roads
Show in Cleveland, Ohio,
January 14th to 18th.

DISTRIBUTORS—We have good
open territory on our complete
line of tilting and non-tilting
mixers. If interested in a live
line of tilting and non-tilting
concrete, mortar and plaster
mixers, write at once for low
prices and liberal discounts.

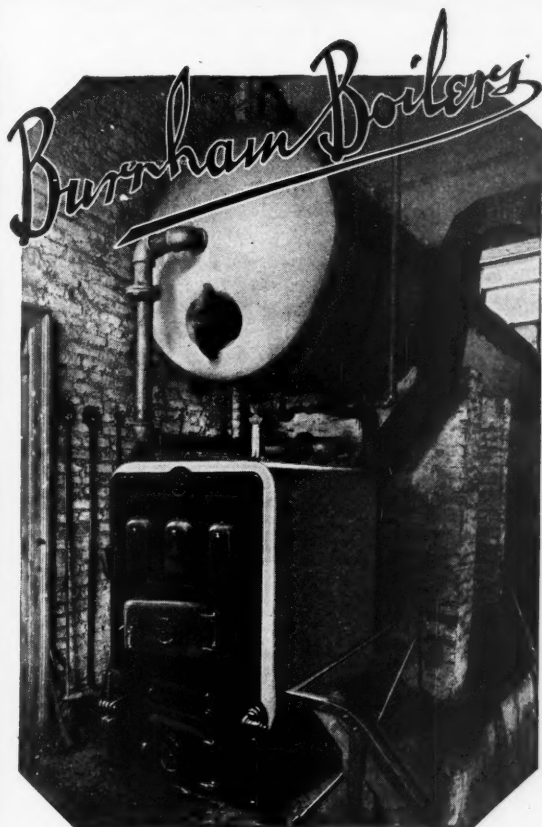
LEADERSHIP

The greatest Kwik-Mix line ever put on the market is now being enthusiastically received by the concrete industry. These models incorporate many new time and labor-saving features with better mixing principles, high grade roller bearing drive with heavy duty, hot-riveted and electric welded steel drum and frame construction.

Write at once for complete description of all the latest improvements found in the new Kwik-Mix Non-Tilting line.

KWIK-MIX CONCRETE MIXER COMPANY
PORT WASHINGTON, WISCONSIN

Dept. 120



This is a high pressure hot water supply Burnham. Made also for low pressure.

Why we can't tell the truth about the savings of this Burnham Boiler

WE can't tell the truth, because you would say it was an untruth. But you can see for yourself that's a 1500 gallon water supply tank.

You can see that the boiler's fire box door is open. You know it's open to hold back the fire.

The photo, furthermore, was taken at the peak time when water is being used the most.

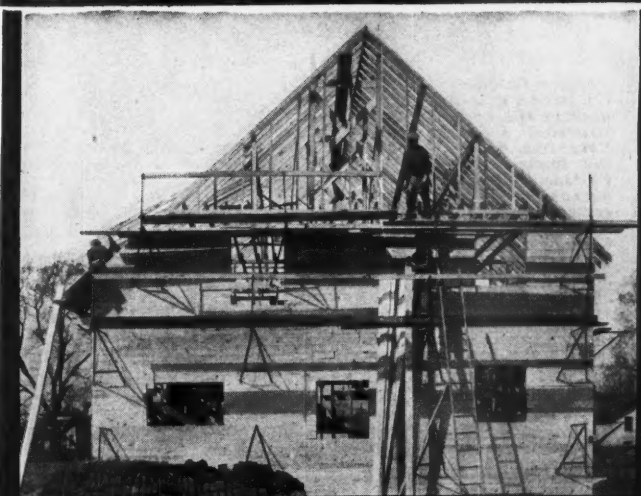
You can draw your own conclusions as to whether or not the Burnham delivers satisfactorily to this 70 family installation at 417 East 89th St., New York City.

Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of
the United States and Canada

Trouble Savers



are
Everlasting Money Makers

Why "Repeat" Scaffolding Costs on Every Job?

You can get Trouble Saver Steel Scaffolding for the same money it takes to wood scaffold a single job. And its first cost is its *only* cost. Lasts a lifetime with no repair or replacement expense.

Minutes vs. Hours

Ten minutes spent in erecting Trouble Saver Steel Scaffolding takes the place of half a day's work in erecting wooden scaffolding. Dismantling is just as fast. Investigate!



Trouble Saver Adjustable Steel Trestles (patented) are quickly adjusted to desired heights, 8 sizes. Each size adjustable from 5 to 15 different heights, giving a range from 16 inches to 12 feet by 3 inch lifts. Save countless sets of wooden horses.



Trouble Saver Studding Brackets support a ton. Will not bend.



Trouble Saver Nail Attached Brackets support a ton. Held by four nails.



Trouble Saver Bolt Brackets. Held by 3/4" bolts.

Trouble Saver Steel Products

Studding Brackets
Nail Attached Brackets
Bolt Brackets with
Safety Railing
Adjustable Trestles

Ladder Jacks
Wood Shinglers
Mortar Board Stands
Sectional Steel
Scaffolding

The Steel Scaffolding Company

1101 No. Governor St., Evansville, Ind.

MONEY BACK TRIAL OFFER

Please send me details on your 30-day free trial offer and full information and prices on Trouble Saver.....

Name

Address

City..... State.....

In PHILADELPHIA

Solvay Calcium Chloride was used in the construction of the Elverson Building, home of the Philadelphia Inquirer. Architects, Rankin, Kellogg & Crane. Contractors, Roydhouse & Arey.



EVERYWHERE leaders of the building field recognize the value of the economies effected in concrete construction by the use of Solvay Calcium Chloride.

In cement finishing alone, the amount Solvay Calcium Chloride adds to profits through time and labor saved is enough to dictate its use.

With many leading builders the use of Solvay Calcium Chloride is a standard practice of floor finishing. On the floor finishing work in the Park Square Building in Boston enough overtime was eliminated by the use of Solvay Calcium Chloride to save \$6,000 for the contractors.

It will pay you to consider the facts contained in the booklet, "Solvay Calcium Chloride in Concrete Construction." Write today for your copy. Ask for booklet 1753.

SOLVAY SALES CORPORATION

*Alkalies and Chemical Products Manufactured by
The Solvay Process Company*

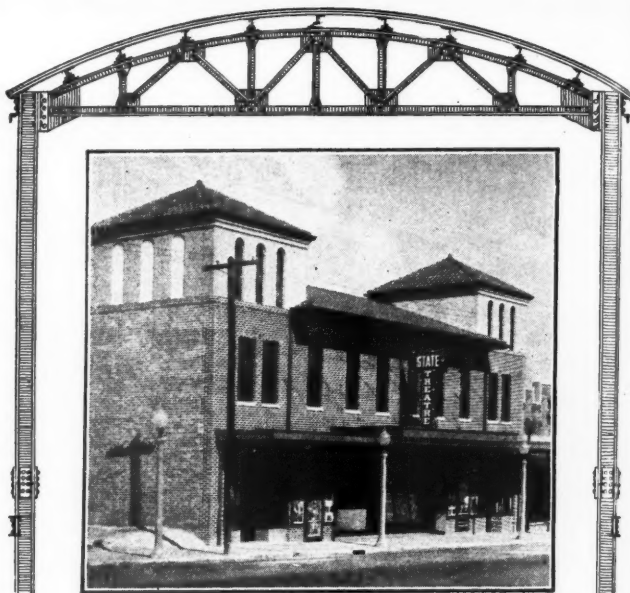
40 RECTOR STREET, NEW YORK

**SOLVAY
CALCIUM
CHLORIDE**

Flake 77%—80%

Manufactured under United States Patents No. 1,527,121 and No. 1,592,971

THE IDEAL CONCRETE CURING AGENT



Of Interest To

CONTRACTORS

THERE are building jobs in your town that mean real profit—and you should have your share! Now it's a garage; tomorrow it may be a church; next day it's an office building, or a theatre, or a warehouse—and they might as well be yours to build.

Take the building pictured above: a theatre, store, and office building, all in one. A local contractor got his prospects together. They decided on the kind of building they wanted. The contractor wrote to "International." Our engineers took the rough ideas presented to them and designed the building shown above; a sensible structure for its varied purpose. Plans and estimates were sent the contractor at no cost, and these plans helped him to close the contract.

Write to "International" for building plans. We shall be glad to cooperate with you. Send today for our large Steel and Garage Catalog.

INTERNATIONAL STEEL & IRON COMPANY

Evansville Dept. 18 Indiana

INTERNATIONAL PRODUCTS

Store Fronts	Public Garages	Steel Trusses
Steel Columns	Steel Girders	Steel Windows
Steel Ceilings	Elevators	Skylights
Sidewalk Lights	Roof Ventilators	Coal Chutes

Our Complete Stocks Assure Prompt Delivery

For Floor Surfacing- BEHR-MANNING DURUNDUM PAPER.

Every Floor Surfer who ever used Durundum Paper has remained an enthusiastic booster for it. And the reason is easy to find. The test of even a single roll of Durundum proves, at once, its faster cutting speed, its exceptionally long life, and its extremely fine finishing qualities—all of which mean **ECONOMY—LOWER COSTS—AND LARGER PROFITS.**

**BEHR-MANNING ♦ TROY
CORPORATION . NEW YORK**



The Triangle Trade Mark identifies every roll of Behr-Manning Durundum Floor Paper.

Use the coupon to get detailed information and prices.

BEHR-MANNING CORPORATION

P.O. DRAWER 74, TROY, N.Y.

NAME _____

STREET _____

CITY _____ STATE _____

MORE PROFIT! THAT'S WHAT YOU WANT ON EVERY JOB! ELIMINATE COSTLY METHODS AND YOU'LL GET IT!

\$35⁰⁰
BRINGS IT
TO YOU

8
MONTHS
TO PAY

The "JIFFY" H.P. PORTABLE GASOLINE SAW RIG

Bigger Income, Prestige, Success Easily within Your Grasp

Why pay out of the profits that should jingle in your own pockets, wages to unnecessary help? Why hire 10 men to do one man's work? Facts are facts. Old methods are costing you money. Equipped with this Saw Rig bigger success and income are easily within your grasp. It has done it for others. It will do it for you!

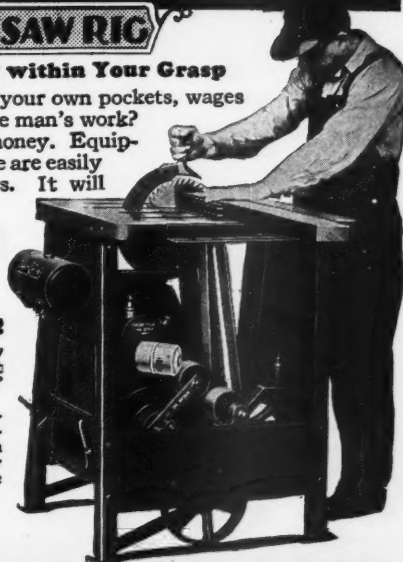
DOES THE WORK OF 10 MEN WITH HAND SAWS!

Just realize! Save 85% of hand sawing on any job! Does anything that a hand-saw can do, only ten times faster, more accurate, better. It cross-cuts, rips, mitres, dados, rabbets, etc. Works up 8,000 to 10,000 feet a day with one man operating—the work ordinarily of ten men! Simple, efficient, economical. Arbor type saw; moves through lumber; not lumber through saw. Rigid, all steel table top, 24x32 inches, and frame. Comes fully equipped with saw blades, guides, etc. Compact, air-cooled, powerful motor. Mounted on wheels. You take it from cellar to attic.

What Users Say!

"I have used the Saw Rig four weeks and it has paid for itself."

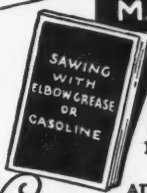
"Perfectly satisfactory from the standpoint of operation and has saved many times the cost of the machine."



Investigate! This Means Much to You!

Costs nothing to get valuable booklet of wonderful facts about this Saw in all construction work—the 10 day Free Trial offer and Easy Payment Plan. This is your opportunity for bigger success; maybe the turning point in your career. Don't pass it up. At least, investigate!

A. S. ALOE COMPANY
1808 Olive St. St. Louis, Mo.



MAIL COUPON FOR FREE BOOK

A. S. ALOE CO., 1808 Olive St., St. Louis, Mo.
Without obligation, send me FREE booklet, "Sawing With Elbow Grease or Gasoline". Also particulars of your "Jiffy" Saw Rig and details of your Easy Payment Plan.

NAME _____

ADDRESS _____



72 Nails You Don't Need

Using only 100 Reading Cut Nails, you can do the same job that would require 172 wire nails—and have a better, longer-lasting piece of work!

For Reading Cut Nails grip the wood with 72% more holding power. Their square corners keep them tightly anchored throughout the life of any building.

Today, Reading Cut Nails are recognized as a standard where more durability and lasting power are required.

There's a type of Reading Cut Nail for every building need. Try them out—you'll stay sold.

READING IRON COMPANY, Reading, Pennsylvania

Atlanta
Baltimore
Boston
Buffalo
Chicago
Cincinnati

Detroit
Houston
Los Angeles
New York
Pittsburgh
Cleveland

St. Louis
Tulsa
San Francisco
Fort Worth
Seattle
Philadelphia

READING CUT NAILS

KIMBALL ELEVATORS in the Home

Put a Kimball in your home—Why climb the stairs when there is a Kimball Push Button Elevator ready to install at your home?

The cost of installation and operation is small and it will add greatly to the comfort of your guests and self.

Kimball Elevators have beautiful cabs built to beautify and carry out the design of your home—and the machine is compact, efficient and easily installed.

Write for Particulars.

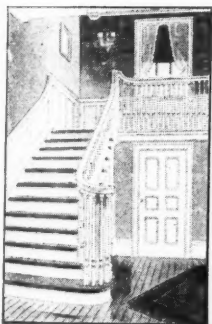
KIMBALL BROS. CO.
989-97 Ninth St., Council Bluffs, Ia.

**FREIGHT
LIGHT ELECTRIC
PASSENGER
PUSH BUTTON
DUMB-
WAITERS**

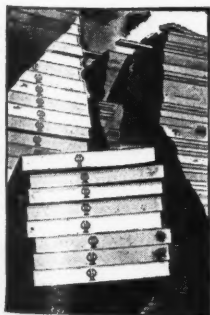
THE
men
sash
rema
that
most
the
smoo



*If you know this pine tree
it is easy to be certain
of good lumber*



Pondsosa is an excellent wood for hallways, stairways, railing, balustrades, and trim. It has also found unusual acceptance for built-in features.




The foremost millwork men know that doors and sash made of Pondsosa will remain snug and true; that Pondsosa takes the most delicate carving; that the finish stays fresh and smooth for years.

Until as recently as "day before yesterday," pine, one of the most important materials used in building, was just pine. Generally it had no distinguishing mark, no endorsement by the manufacturer.

Now, to be sure of having durable, well-seasoned, accurately graded pine in a house, all you need know is that it carries the imprinted trademark of the Pondsosa pine tree.

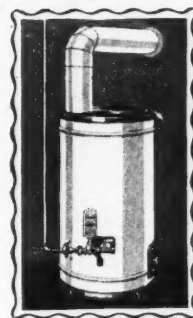
For now a machine has been perfected by which this well-known lumber is trade-marked at the mill where it is made. It means that fifty of the foremost mills of the great Northwest who are turning the beautiful, straight pines of the Inland Empire into even-grained, light, strong lumber are proud to send a product to market which can be purchased with utter confidence.

Wherever a light, easy-to-work, soft wood is needed for sheathing, siding, inside or outside trim, for paneling or built-in features, Pondsosa Pine is the ideal wood. Western Pine Manufacturers' Association of Portland, Oregon.

Pondsosa Pine 
The Pick o' the Pines

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Would You Take \$1000 MORE ?



Who ever heard of a prospect offering *more* for a house!

Yet that is the practical effect on your pocket when you show a house with the extra value of INCINOR—the Home Incinerator.

Your sale comes quicker, because INCINOR is a looked-for sign of *modern* building. INCINOR is one of the real *conveniences* that people want today.

An early sale means money *saved*, in interest, taxes, sales expense. It generally means you get *your* price.

Yet this big investment in favor of money-saving and money-making involves as little as \$100 f. o. b. factory.

INCINOR banishes the *unsafe, unhealthful, unwholesome* garbage can. INCINOR disposes of garbage, rubbish and trash The Decent Way—*burns it with gas.*

Simple, compact, *gas-fired* INCINOR installs as easily as a gas range. Investigate INCINOR and you will put it in—because home buyers want it.

See it at your gas office, the Incinor dealer in your community, or write us for full information.

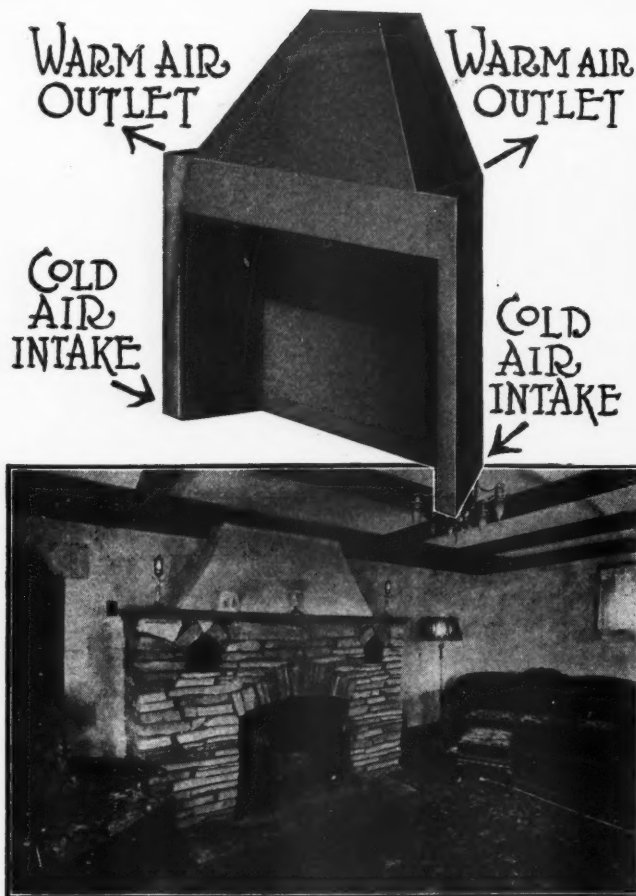
For as little as \$100 f. o. b. factory

HOME INCINERATOR Co., Security Building
Milwaukee, Wisconsin

INCINOR.
THE HOME INCINERATOR
Good Riddance
GARBAGE • RUBBISH • TRASH



© 1929, H. I. Co.



The Heatilator assures fireplace perfection

We guarantee that any fireplace built with a Heatilator will burn satisfactorily, without smoking, and will deliver double heat from same fuel. Otherwise we will refund the purchase price with an extra sum for removal and return.

The Heatilator is a scientifically designed, double-wall, non-rusting, metal form—complete up to chimney flue. Without a Heatilator no fireplace can be built with certainty of charm and comfort; with it, proper construction and entire satisfaction are positively sure. Savings in damper, smoke box, materials, labor and fuel more than cover cost. Many sizes.

Write for plan sheets and the nearest dealer's address.

HEATILATOR COMPANY
601 Glen Ave., Colvin Station,
Syracuse, N. Y.

Home buyers want Heatilator-built Fireplaces

The Heatilator is extensively advertised in such magazines as:

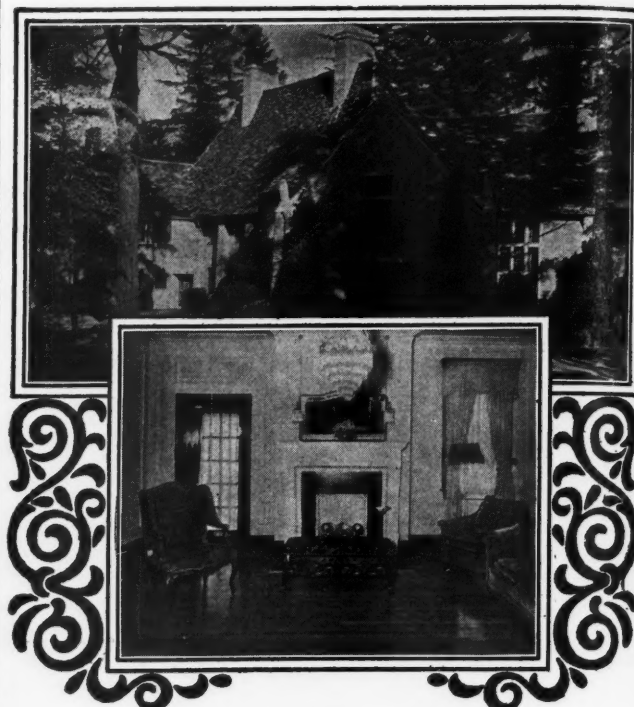
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Home Building
American Magazine
Liberty
Literary Digest
Better Homes & Gardens
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Good Housekeeping
Country Gentleman
House & Garden
House Beautiful
Rural New Yorker
Small Home

Good fireplaces add to property values

Heatilator Fireplace Unit

Heatilator Co., 601 Glen Ave., Colvin Sta., Syracuse, N. Y.

Please send plan sheets and full particulars to (Name and address below).



OAK FLOORS *enhance their value*

Houses laid with "Perfection" Brand Oak Flooring command a better price on the open market.

You can depend upon "Perfection." In modern plans operated by skilled lumbermen, only the finest oak is selected. After proper seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.



ARKANSAS OAK FLOORING CO.
PINE BLUFF, ARK.

There's a size and grade for every structure, new or old. Write today for particulars.

'PERFECTION' Brand Oak Flooring

"Perfection" Brand Oak Flooring Blocks and Planks may be obtained chemically treated by the *CELLIZING process.

Use KUHL'S for Glazing, Caulking and Pointing-up



You will find KUHL'S ELASTIC COMPOSITION unequaled for bedding and glazing sash, skylights, conservatories and glass construction work, tile-setting, etc. Fine for pointing stone and terra cotta work. Ideal for window caulking. Also made in consistency to be used with gun.

Kuhls' Composition is elastic, never sets hard, adheres strongly to wood, metal, glass, concrete, etc. Never cracks or crumbles. Stands heat and cold and is not affected by moisture or changing weather.

Kuhls' Elastic Composition can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. It is now used by the best builders, contractors and architects and greenhouse builders in the country.

Fill out the coupon below; we will mail you a Free Sample, literature and prices.

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BROOKLYN, NEW YORK



Get These
Booklets
and FREE
SAMPLE

H. B. FRED KUHL'S
6415 Third Ave., Brooklyn, N. Y.

Please send me free of charge your literature and a sample of KUHL'S Elastic Composition for:

☐ Glazing ☐ Caulking ☐ Pointing-Up

Name.....

Street.....

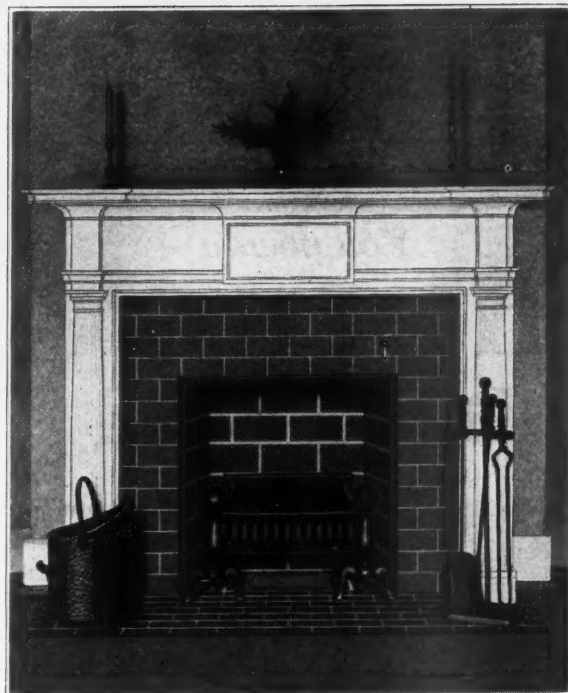
City.....

State.....

My occupation is:

☐ Builder ☐ Dealer ☐ Architect ☐ Real Estate ☐ Home Owner

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The Fireplace That Always Works



With the Peerless Fireplace Dome Damper to form the correct throat construction and to assure perfect draft control there never need

be any worry about the fireplace working properly. Their high grade cast iron construction, simplicity of operation and reasonable cost make the installation of Peerless Dome Dampers a necessity wherever fireplaces are installed. Made in every necessary size and three styles of control.

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324 W. MAIN ST.
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PEERLESS MFG. CO.,
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Louisville, Ky.

Kindly Check

☐ Contractor ☐ Architect
☐ Home Owner ☐ Dealer

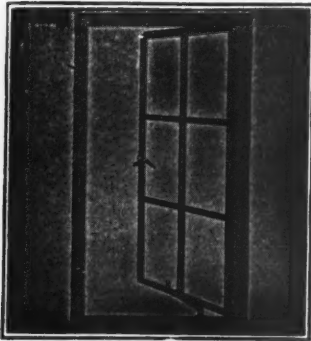
Please send Peerless Fireplace Damper Information.
☐ Other Building Specialties.

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Town..... State.....

THESE WINDOWS WILL MAKE A PROFIT!

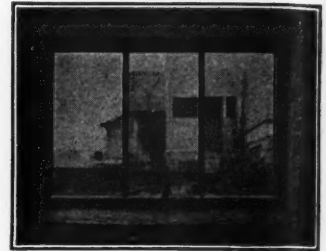


Residence Casement

DEALERS are making money in handling Bayley-Springfield Steel Windows. Designed for all types of buildings. Bayley construction features make for great strength and economical installation, and are the result of 45 years' experience in architectural ironwork. Carried in stock so that a dealer's turnover makes the Bayley line an attractive proposition.

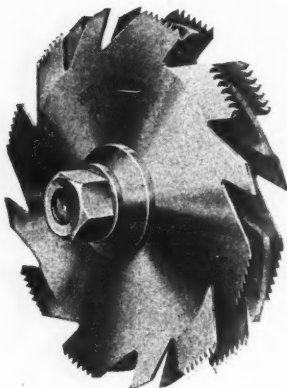
THE WM. BAYLEY COMPANY
128 West North Street SPRINGFIELD, OHIO
Sales Offices and Warehouses in Principal Cities

Bayley-Springfield Steel Windows



Windows for Basements
The Bayley Window for basements in residences, apartments and other buildings. Fine for side walls in garages and small buildings. Cost no more than wood, yet give 50 per cent more light—made in four standard sizes.

You need a HUTHER Dado head



Developed from our own patents, this adjustable groover cuts either with or across the grain. Cutters may be used singly, in pairs or in any combination necessary for desired cut.

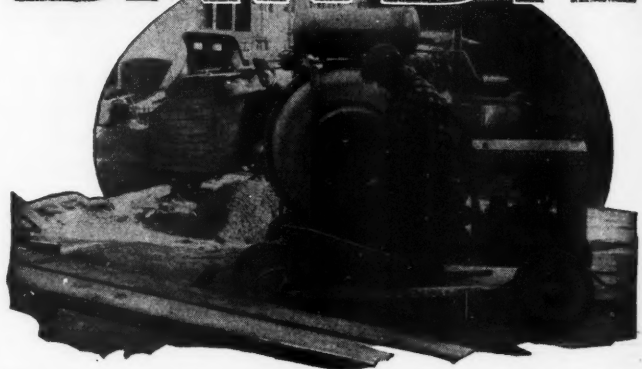
Send for one on approval. It may be returned at our expense if unsatisfactory.

Huther Bros. Saw Mfg. Co.

Rochester, N. Y.

Makers of Better Saws for More than Fifty Years

KOEHRING DANDIE



Here's a Speedster!

FAST! Fast from materials in the wheelbarrows to concrete in the forms!

It's the high-speed, money-making hustler — the long distance dependable, fast performer—a typical Koehring super-value, yet within the price range of light mixers!

Send for catalog D-1.

CAPACITIES

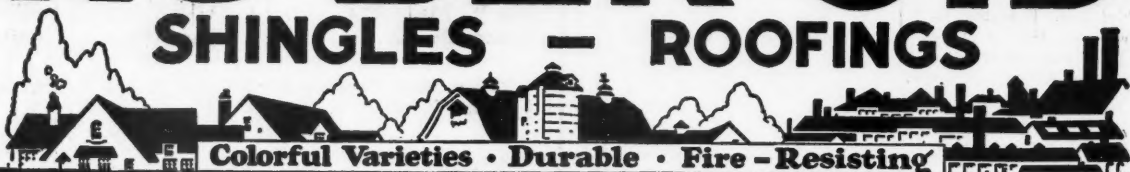
Dandle—5 S, 7-S, 10-S—5-S single cylinder; 7-S and 10-S two or four cylinder radiator cooled Ricardo head gasoline engine. Rubbertires with steel disc wheels or steel rimmed wheels. Complies with A. G. C. Standards.

KOEHRING COMPANY, MILWAUKEE, WISCONSIN
PAVERS, MIXERS—GASOLINE SHOVELS, CRANES AND DRAGLINES

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Genuine RU-BER-OLD SHINGLES — ROOFINGS



Colorful Varieties • Durable • Fire-Resisting

Make certain that the shingles and roofings you buy carry the label, "Genuine Rubberoid."

There are weights, styles and colors to

provide the protection and beauty you desire for every type of building you roof or re-roof.

See the dealer who handles Genuine

Ruberoid, or write for samples, addressing your request to The RUBEROID Co., Dept. 1, 95 Madison Avenue, New York, N. Y.

370 Rafters.....

506 Studdings
all the Roofing

TIME AND MONEY SAVED ON PRACTICAL WORK

This machine will handle all material from the lightest veneer to 2½" thickness. It is built sturdy and strong and will carry long, heavy work such as rafters, roofers, etc., as well as flooring, siding, trim, etc.

The motor runs from any light socket.

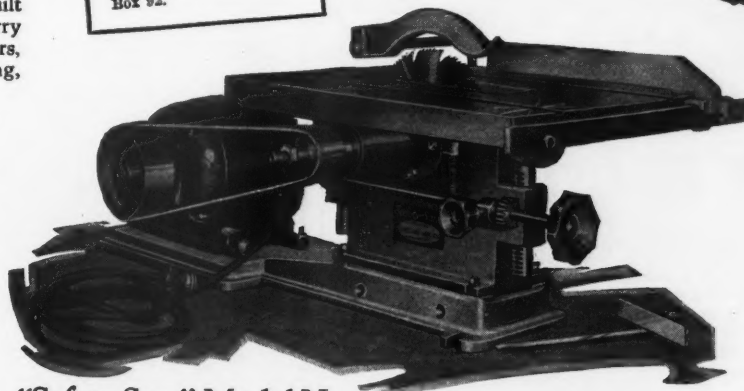
Can be furnished with gasoline engine if desired.

RIPS · CROSS-CUTS
MITERS · GROOVES
RABBETS · BORES
TENONS · BEVELS
MORTISES · DADOES
GRINDS · SANDS
TONGUES · BUFFS

The Safety-Saw arrived O. K., as I was just starting a building 170 ft. long and 30 ft. wide, 2-story, for summer colony. Last week we cut 370 rafters and 506 studdings and all the roofing for this job, and did every bit of it on this Safety-Saw machine. One man did the sawing and seven men nailed up.
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Union Pier, Mich.
Box 92.

U. S. S. MODOC
I have been using a "Safety-Saw" for over a year and I consider it the best bench machine on the market. Carpenter work that must be very rugged and faithful, as it is called upon to run for days almost continuously on all kinds of work. Repairs to life boats, lockers, tables, chairs, desks, and the manufacture of rough work for salvage operations. I found I could always depend on the "SAFETY-SAW."
W. L. DEAN,
Ships Carpenter.

Your "SAFETY-SAW" is handling 80% of my cutting on the bungalows I am ready to start trim-jointer, so send me a 4" same motor as my saw. The saw has paid for itself many times and I expect the jointer will do the same.
RAY STRODE,
Galien, Ohio.



"Safety-Saw" Model N

\$8150

COMPLETE
WITH ½
H. P. MOTOR

and standard equipment as shown.
Mounted ready to run.

Other models
from \$35 up.

BALL BEARING

RAISES AND LOWERS ON A LEVEL. TILTS TO 45 DEGREES

You will appreciate the advantage of these features. In every operation except beveling, the material is always worked level. There are no hinges on this machine, and therefore material is never worked up or down hill. This is especially beneficial when undercutting, dadoing, grooving, mortising, making mouldings, etc. At any height the table always remains absolutely level. It tilts on a true arc to any angle up to 45 degrees without removing throat. Gauge on tilting device gives absolute accuracy.

We Also Manufacture

A complete line of woodworking machinery. Saw Tables from \$35.00 up. 4" and 6" Direct Motor and Pulley Drive Jointers. 16" Band Saws Combination Woodworkers. Both Electric Motor and Gasoline Engine outfits. Before buying any equipment it will pay you to get our catalog and prices.

15 Day Trial

Our TRIAL OFFER protects you from risking a single cent. Whether you are ready to buy or not, we will be glad to send you our free literature.

SEND THIS COUPON TODAY FOR DETAILS
SAFE TOOL MFG. CO., Bridgeport, Pa.
Please send free folder describing the "Safety-Saw" and other bench machines you manufacture. Also free trial and money-back offer.
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Occupation.....

SAFE TOOL MFG. CO., BRIDGEPORT, PENNA.

AB-19



Electric Capstan Winch—
for all purposes.

WINCHES

Safety Worm Geared Winches
—made in eight sizes, 100 to
6000 pounds capacities.

Manufacturers of winches for all purposes. Power, Electric and Hand Winches. For Motor Trucks, Tractors and general purposes. Also Lifting Jacks, and Rollers for Lumber Trucks.

Write for Bulletins and prices. State for what purpose winch is to be used, and weight of load to be lifted.

Manufactured by

Stimmel Winch & Machine Works

Works and Offices: 562-66 W. 22nd St.

New York City



Just Completed and the Outstanding Success of the City

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48th Street, West of Broadway, New York City—Times Square's Finest Hotel

Within convenient walking distance to important business centers and theaters. Ideal transit facilities; 450 rooms, 450 baths. Every room an outside room—with two large windows. Large single rooms, size 11' 6" by 20' with bath, \$4.00 per day. For two, \$5.00—twin beds, \$6.00. Large double rooms, twin beds, bath, \$6.00 per day. Special weekly rates. Furnished or unfurnished suites with serving pantries, \$95 to \$150 per month. Moderately priced restaurant featuring a peerless cuisine.

Illustrated Booklet free on request.

CURTIS A. HALE, Managing Director



SASH CHAINS

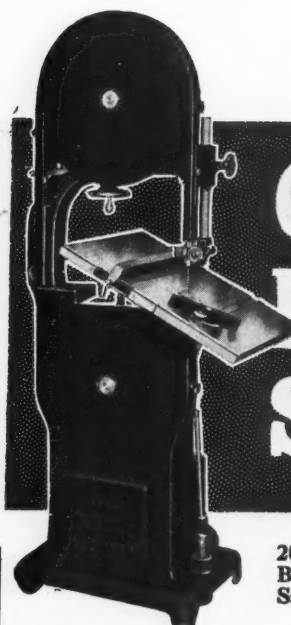


THE
SMITH & EGGE
MFG. CO.

Bridgeport, Conn.

ORIGINATORS OF
SASH CHAINS





Compact Rugged Speedy

20"
Band
Saw

**Every Contractor
Needs It**

You can save time and money with Gallmeyer and Livingston Union Woodworking machines. The work you are now turning out on bulkier, more expensive machines can be done with greater speed, and more economically with Unions.

Union Woodworking Machines are compact, and easily moved from one job to another. They will attach to any light socket.

In this day of keen competition, every contractor needs Gallmeyer and Livingston machines. They cut costs in many ways. They help you land more jobs. They cost less to buy and to operate. Insurance is less. There is less depreciation. You should know about the many advantages of Gallmeyer and Livingston Union Machines.

Send today for catalog and complete information. **Free.**

GALLMEYER & LIVINGSTON CO.
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ALUMINUM GENERAL PURPOSE (90 lb.) FLOOR SANDER



**Latest Model—
Just Out!**

**Built for
GREAT SPEED and
HIGHEST QUALITY
of work**

No vibrations—no dust—no chains—no belts. Roller sands even with wall on either side of machine. 9' long roller 1-3/4 HP AC & DC motor.

Write for price

WAYVELL CHAPPELL & CO.
36 Jackson St., Dept. Z., Waukegan, Ill.

BOYLE'S BAYONNE

ready to lay
Roof and Deck Cloth



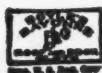
The ideal covering for Porch Floors, Decks or Piazzas, Sun Parlors, etc.

**Waterproof
Weatherproof
Durable
Flexible**

**Lays flat
Stays flat**

Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

Write today for our Sample Booklet "P."



JOHN BOYLE & CO. Inc.

Established 1860

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New York
St. Louis, Mo.

Adamston *Vertically Drawn Flat Glass*

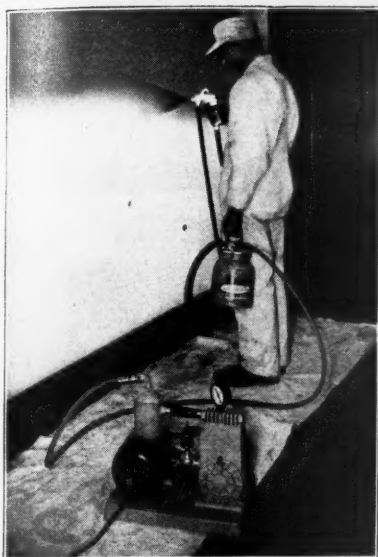
PERFECTLY FLAT
NO MACHINE DEFECTS
UNIFORM IN THICKNESS
NO RIGHT OR WRONG SIDE
BRILLIANT NATURAL FIRE POLISH



A brand you
can depend upon.

ADAMSTON FLAT GLASS COMPANY
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Here's the *SprayMaster!*



The new light weight, low pressure spray painting machine shown here is "just what the doctor ordered" for you men who build homes and other structures.

For years we have been among the leaders in the spray painting equipment field. Our gas engine and motor driven machines are in successful use by contractors the country over. And this, our latest model—the Spray Master—is

Our Masterpiece!

With the Spray Master jobs are finished on time—no hold-ups due to lack of help, etc. These advantages mean economy. This great machine instantly enables every painter to do a master job every time. Practically noiseless, no excessive "fog," and always perfect atomization of paints, lacquers,

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If you want to cut your painting costs, speed up the work, and satisfy everyone concerned, write for the details of the Spray Master today.

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"Low Pressure — High Quality"

Rybolt Furnaces

MEASURE UP



To Your Standard of Profit

To Our Standard of Dimensions

To the Owner's Standard of Satisfaction

Write for catalogue and dealer's prices

THE RYBOLT HEATER CO.
ASHLAND :: OHIO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

"EDWARDS"

METAL Spanish TILE ROOF

Beautiful - Durable Economical

Write for Beautifully Illustrated Catalogue It Explains



A remarkable transformation takes place when an "Edwards" Metal roof is properly applied to a house—all of the charm of the old Spanish Terra Cotta Roofing Tile is preserved, even to the color.

An Edwards Metal or Tile Roof is a real commercial asset and will bring a better return in rent or sale.

Edwards Metal Roofings made to have the appearance of wood shingles, tile, slate, or any other roofing effect, and none of these fine artistic effects will cost any more than a plain, commonplace roof.

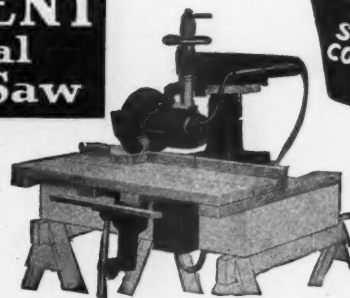
All Edwards Metal Roofing is easy to lay—no big expense for skilled labor—storms and winds will not wrench it loose. It is lightning-proof and fire-proof—Reduces Insurance Rates.

When an Edwards Roof is laid, it is there to stay.

THE EDWARDS MFG. CO., 401-417 EGGLESTON AVE., CINCINNATI, OHIO
The World's Largest Manufacturers of Metal Roofing, Metal Ceilings, Metal Garages, Portable Buildings, Rolling Steel Doors, etc.

CRESCENT Universal Cut Off Saw

Adds To Your Business—Increases Profits



THIS labor saving machine so materially cuts costs that you can figure closer on jobs, and yet make a lot more money. It is light in weight. Take it out and move it about on the job. Attaches to any light socket. Of ample capacity, fully powered.

Completely guarded, no flying saw dust. Quickly adjustable, accurately graduated. Does eleven different operations, including straight cutting off, angle cutting, ripping, stair routing; making mouldings. Fully guaranteed on a money back basis. It is worth your while to learn more about it.

We Build:

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Variety Woodworker
Planers
Planers and Matchers
Disk Grinders
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THE CRESCENT MACHINE CO., 224 Main St., Leetonia, Ohio
Send booklet showing the many uses of the Crescent Universal Cut-off Saw

Name _____ Street _____ Town and State _____ Business _____

THE IMPROVED SCHLUETER

For TWO CENTS Cash!

We want you to try the Improved Schluter on any floor. Stack it up against any other Surfacers! *Prove*, by working it eight hours a day, all day long, that it is the "Greatest of them of All."

Send no Money!

The two cents you spend for a stamp will bring you Complete Description of all models, Testimonials of Users, FREE TRIAL Offer, and Details of EASY PAYMENT Plan. Learn what *automatic* Floor Surfacing really means.

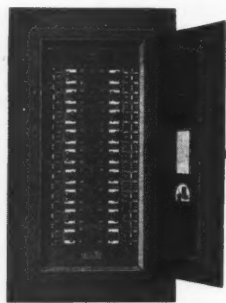
Write today.



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FLOOR-MACHINERY CO., INC.
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GREATEST OF THEM ALL



Why Ⓣ Panelboards are better

The fundamental requirements of all panelboards are safety, dependability and freedom from maintenance.

Ⓣ Panelboards are entirely dead front, built of composite material sections and remain safe because the "front" covering live portions cannot be taken off and forgotten.

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Ⓣ Panelboards are standardized completely, so are the Ⓣ Steel Cabinets. Each is a duplication of the models designed and tested by Ⓣ engineers in the laboratory. Hence nothing fails—no maintenance is required.

Send for estimates, catalogs, and details, free of course.

Frank Adam

ELECTRIC COMPANY
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OFFICES IN 30 PRINCIPAL CITIES

HESS CABINETS and MIRRORS

Snow-White Steel



COLONIAL

Another De Luxe Style

Beautiful — Distinctive.

The mirror entirely conceals the cabinet. Suitable for the finest bath room.

Made in six sizes. We make five other popular styles.

Ask your jobber; or write for illustrated booklet.
HESS WARMING & VENTILATING CO.
Makers of Hess Welded Steel Furnaces
1220 S. Western Avenue, Chicago.

Coming to NEW YORK?

Everything NEW
but its convenient location!

FROM lobby to roof, the well-known McAlpin is now a NEW hotel—completely modernized—providing the finest accommodations in New York.

NEW, comfortable, modern furniture.

NEW, luxurious carpets throughout—

NEW, beautiful decorations—selected with the same care and thought you would exercise in furnishing your own home. Bed reading lamps in every room.

NEW, high speed, self-leveling elevators that whisk you quickly and safely to any one of the 24 floors of the McAlpin.

A NEW type of courteous service ranging from quietly slipping the morning newspaper under your door to the iron-clad guarantee of the new management to COMPLETELY SATISFY EVERY GUEST!

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NEW RATES!

from \$3.50 per day

McAlpin Rates NEVER VARY—in each room is plainly posted the RATE OF THAT ROOM

HOTEL McALPIN
ONE BLOCK FROM PENNSYLVANIA STATION
BROADWAY at 34th St.

Cross
Out The
Expense

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HAND
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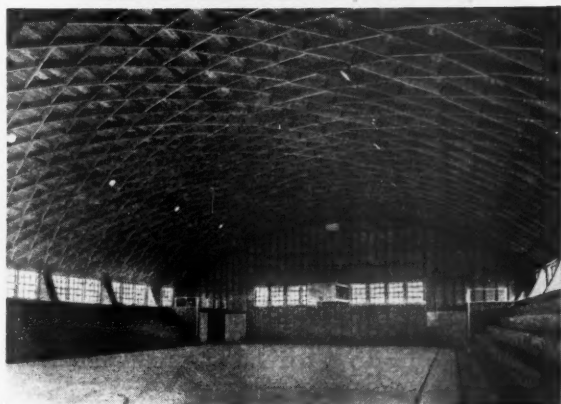
Eliminates much hand-sanding, planing and scraping. Original hand belt sander securing a rippleless finish. Universal motor runs off light socket. New Super Model with 1 H.P. motor easily handles the hardest jobs. Used by thousands of carpenters, builders, ship yards, woodworkers, refinishers, and many others. Particularly useful for sanding stairs, closets, and other hard-to-get-at places.



For sanding large surfaces the SPEEDMATIC "3" drum sander is hard to beat. A high production machine that can be carried by one man.

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Trussless ARCH ROOFS

Quickly and Economically Erected
Thoroughly Safe—Very Attractive

Good distribution of light, excellent acoustical conditions.
Adopted for auditoriums, dance halls, garages, warehouses, factories, etc., in all parts of the country. Spans up to 150'.

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who know a good thing when they see it—and are willing to do their share of the work to get the profits. Men needed in all parts of the country to start immediately in their own home towns to sell a strictly high grade inside completely decorated wall tile material that sells with satisfaction.

Exclusive agencies assigned only to men who can qualify.

Successful candidates must be industrious, hard workers who are responsible and able to finance themselves and take care of collections. From \$800.00 to \$1,000.00 cash required. You deal strictly with architects, builders and home owners.

Mail coupon today for complete details regarding this remarkable proposition. Unless applicant can fully qualify as per above, application will be utterly disregarded.

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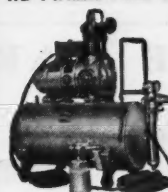
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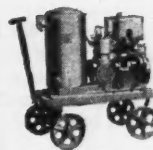
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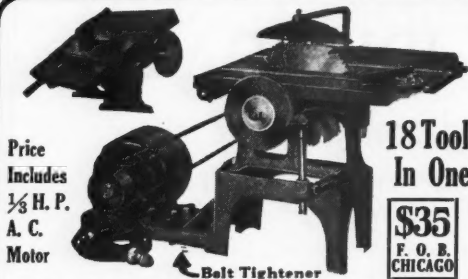
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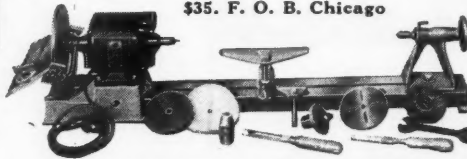
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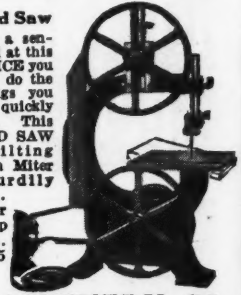
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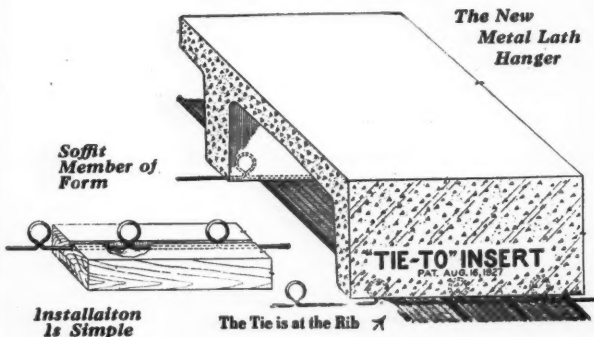
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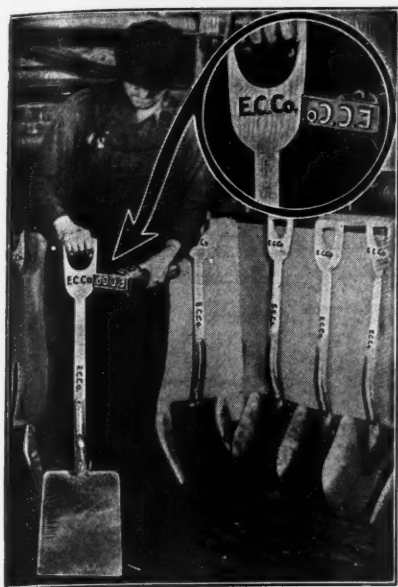
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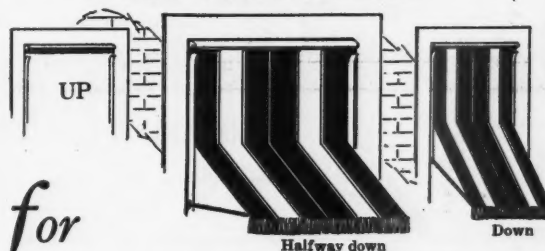
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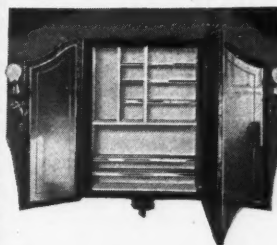
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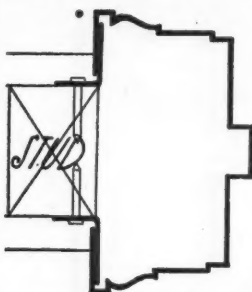
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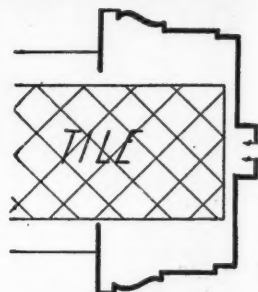
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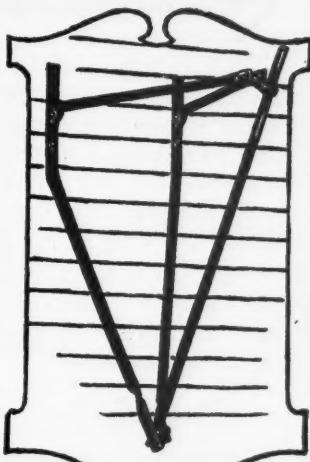
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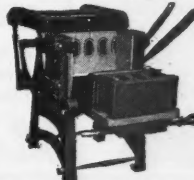
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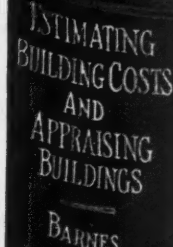
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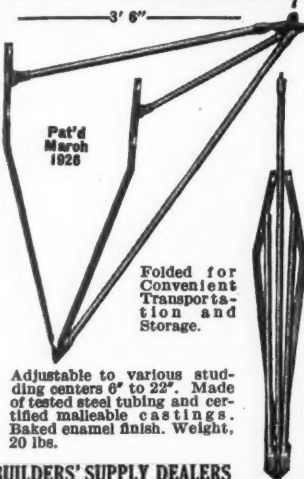
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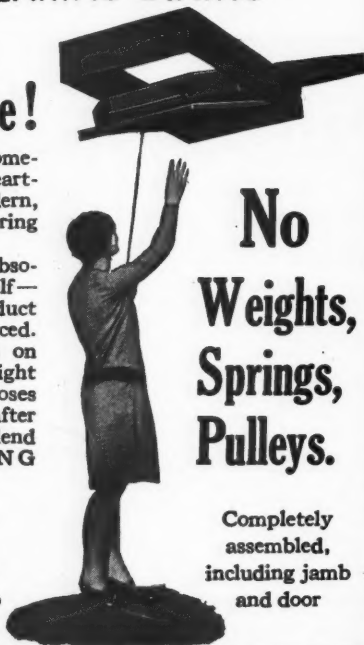
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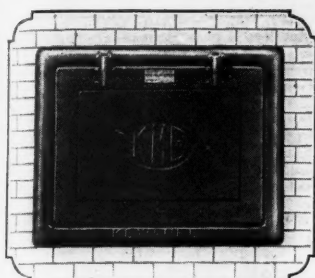
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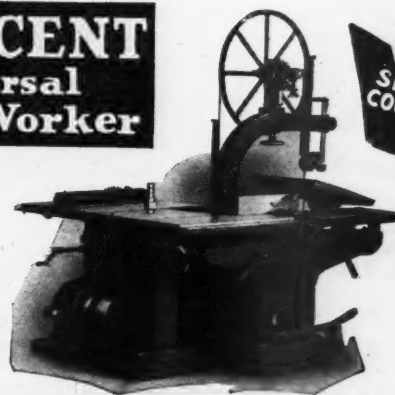
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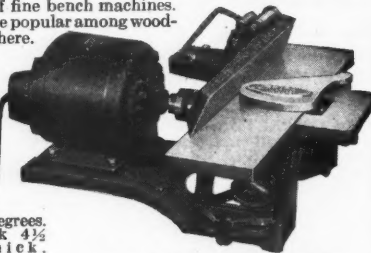
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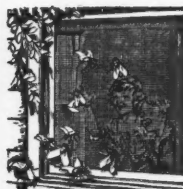


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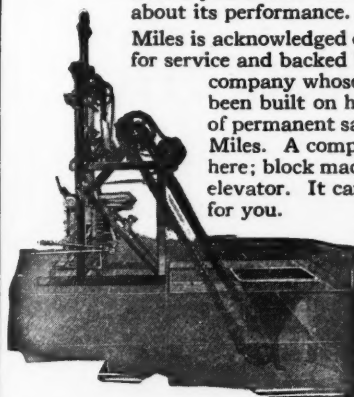
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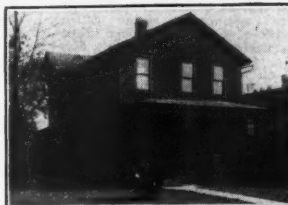


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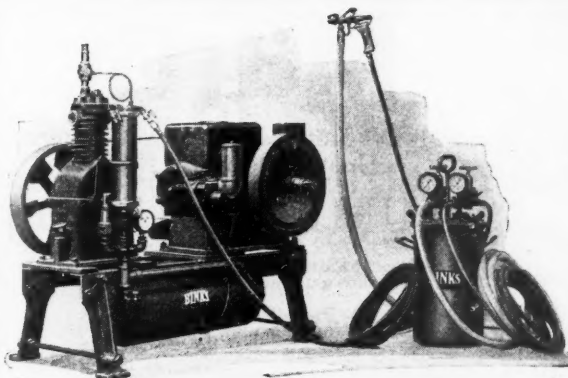
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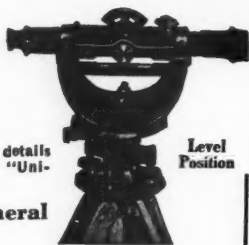
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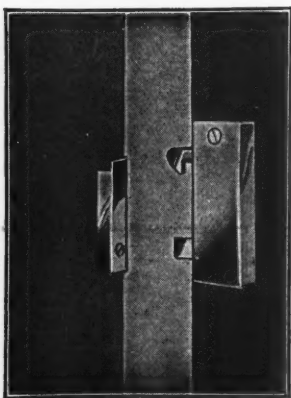
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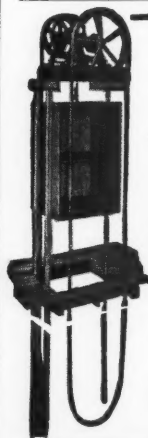
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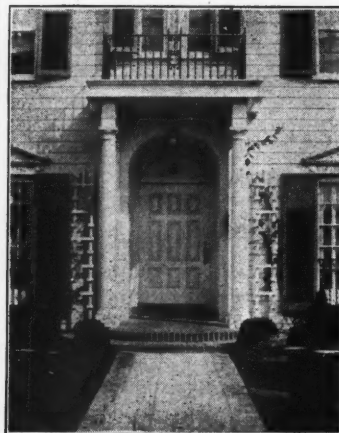
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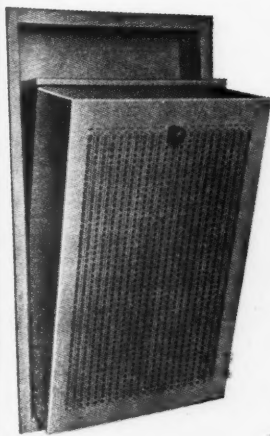
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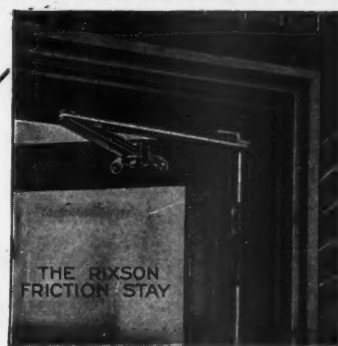
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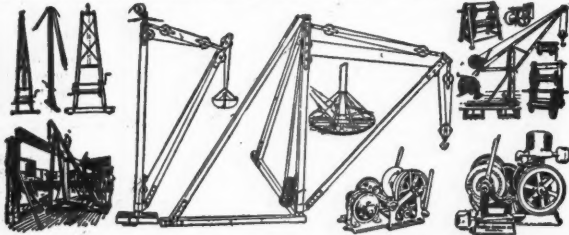
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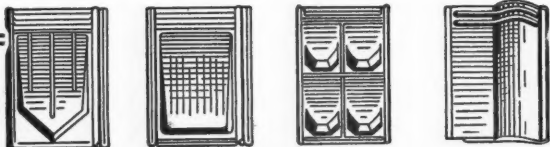
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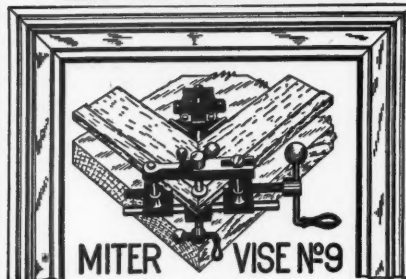
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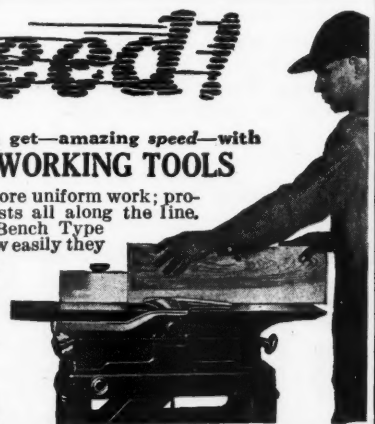
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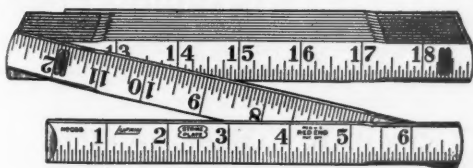
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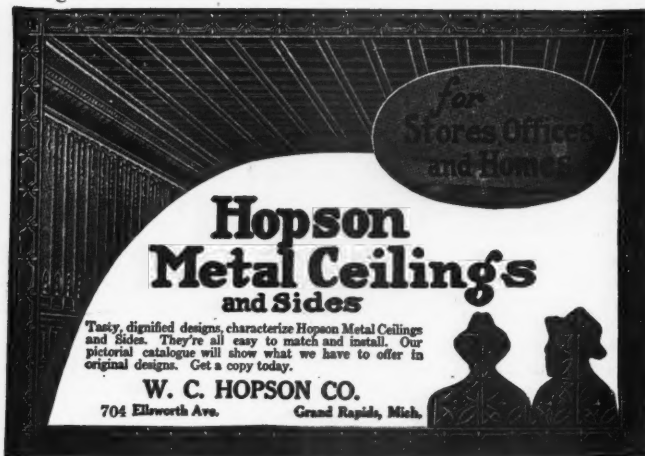
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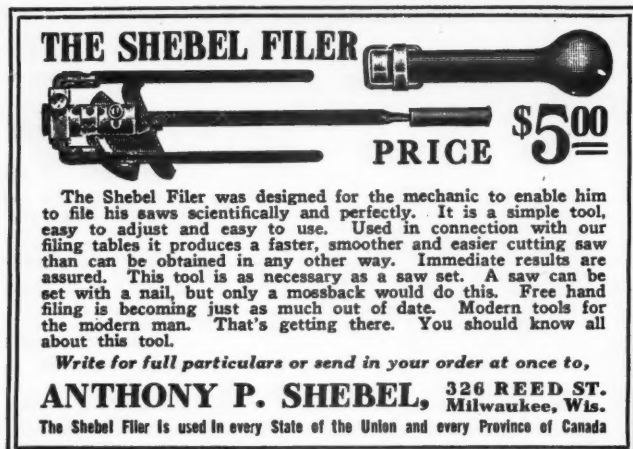
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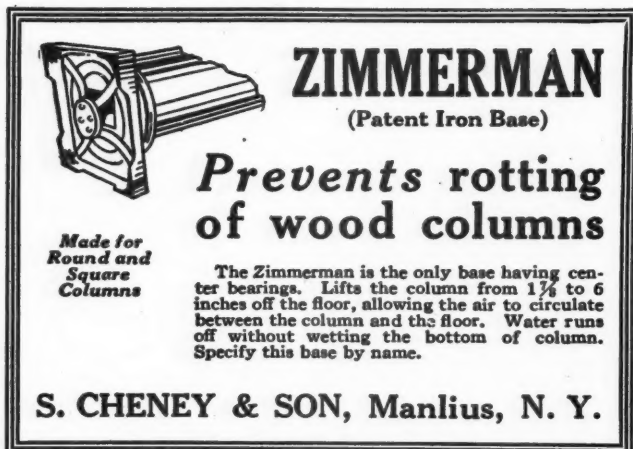


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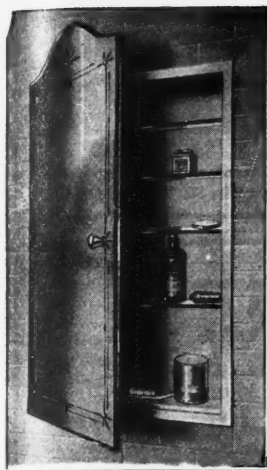


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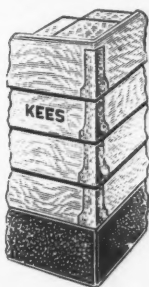
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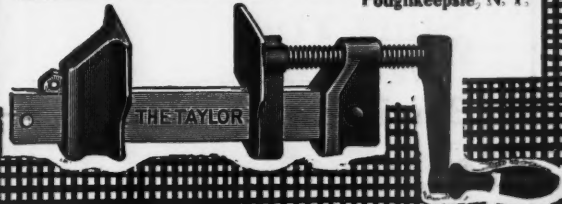
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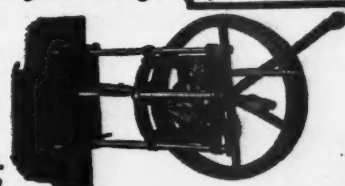
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No Deposit Required to test a "STERLING" Convertible Wye Level

For ten days it's yours ... to use in your work ... test as you will ... and compare with others. There's absolutely no cost ... obligation ... or risk ... not even a deposit is required.

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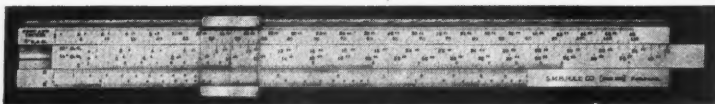
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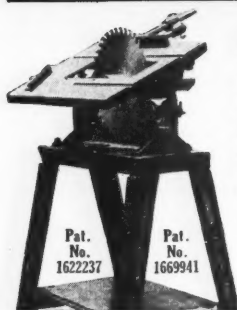
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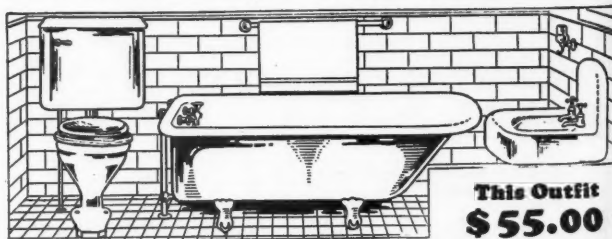


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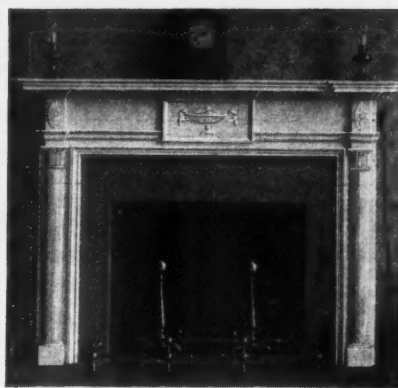
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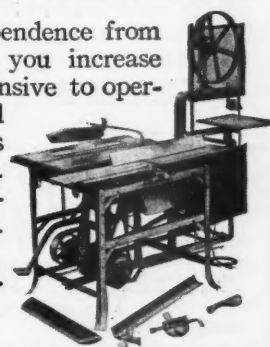
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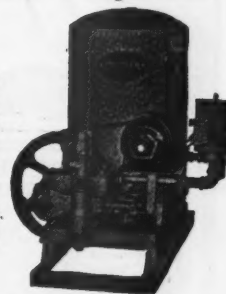
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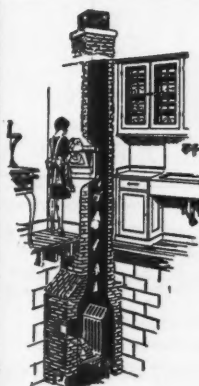
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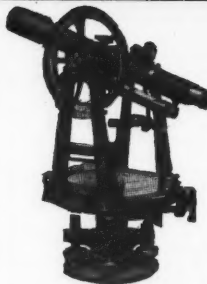
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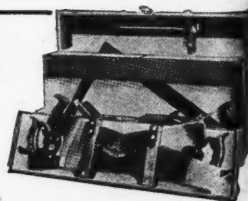
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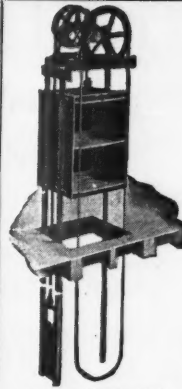
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This machine is as easily moved as a wheelbarrow and so can always be moved to the work rather than bringing the work to it.

New bulletins describing the **SPEEDSTER** are ready—send for one.

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Hand Sawing
On Your Job*

*A Money Maker
for YOU*

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THE FINEST Tool Manufactured for important wood work.

Specially adapted for Hardwood operations; indispensable to the High Class Carpenter and for Cabinet and Pattern Works.

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A sample bit up to 1 inch in diameter will be mailed postage prepaid, upon receipt of 75c to any woodworker or carpenter.

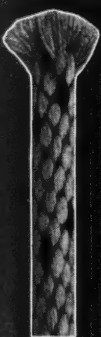
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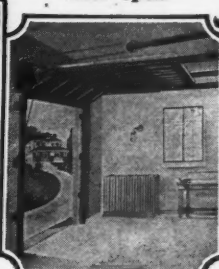
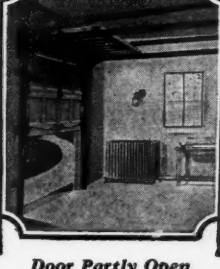
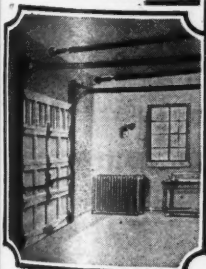
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(TRADE MARK)
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*Dealers, Builders,
Homeowners write
for full information.*

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Door Partly Open

The "Overhead Door"

Opens up, out of the way. No home is modern without a garage, and no garage is modern without an "Overhead Door."

Overhead Door Corporation, Hartford City, Indiana***CELLized Oak Floor Blocks**

—laid directly over a wood subfloor or concrete in **EVERBOND**, a plastic cement, without nails. A quiet permanent design oak floor, beautiful, cleanly, economical.

—***CELLized**,—a chemical treat, to protect against the action of moisture. Improves the finish. Resistant to insect attacks, and decay.

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***CELLized Oak Flooring Inc.**

Memphis, Tennessee



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Spending to Save

NO question about it, there's a real market in this country for low-priced homes—little bungalows, cottages. And there's a demand for apartments, flats of modest cost, too—apartments that won't take half what a fellow makes for their rental.

Maybe you'll be surprised to hear it, but a great many such buildings are equipped with Good Hardware—Corbin. Of course, Corbin makes a big line of hardware—every conceivable item to equip any building—and you can get low-priced stuff made by Corbin to answer your needs, if you think you've got to have it. But the point is that a surprising number of low cost buildings today are equipped with *high grade* Corbin Hardware.

Sounds like the old bunk, doesn't it? Well, it isn't, for there's a real reason behind it and that reason isn't Corbin's great reputation or the superior quality of the hardware, or any of the other usual "reasons" you often find in an ad. We're talking about buildings built to a price, you remember.

Now what makes up the cost of a building? Material, of course. And labor—ah, there's the place for costs to pile up—labor! That's

where a great big percentage of building costs goes. It costs a lot more to pay the men who build a place than it costs for material. That's the reason why any saving in labor is quickly reflected in costs—which brings us to the reason why high grade Corbin Hardware is used in lots of low-cost structures.

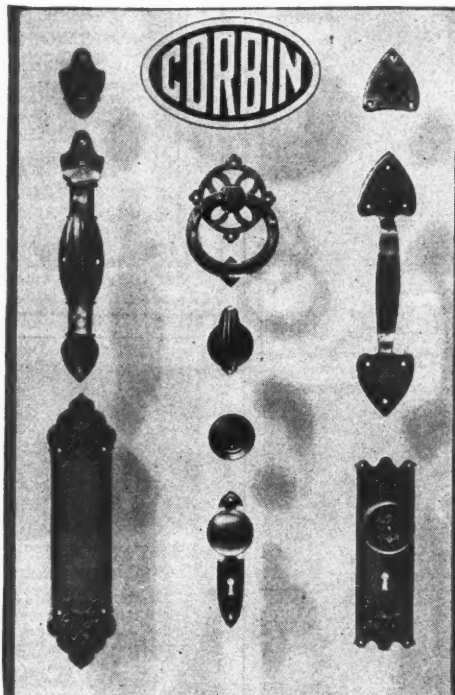
It takes time to put in hardware trim—lots of time. So it means a good deal when

the carpenters can go right through a building doing the same job on every door—no special fitting of individual locks, or anything like that. It saves time. Well, that's exactly what can be done with Good Hardware—Corbin. Take the Corbin Unit lock, for instance. The carpenter simply cuts a U-shaped notch in the edge of the door with saw and chisel, slips the Unit lock into the cut and screws the escutcheon fast. That's all.

Good Hardware—Corbin—is all like that. You'll find no warped pieces. Items don't vary—each item is *exactly* the same size as its duplicate. It's easy to fit and so it saves an enormous amount of time, of money.

Cheap as a building may be, it's good business to use high grade Corbin hardware—Good Hardware—Corbin.

Good Buildings Deserve Good Hardware



P. & F. CORBIN SINCE 1849 **NEW BRITAIN CONNECTICUT**
The American Hardware Corporation, Successor
 New York Chicago Philadelphia

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STA-PUT

GARAGE DOOR CONTROL

**HOLDS DOORS RIGID—OPEN OR SHUT
Stops Danger of Monoxide Poisoning**

Contractors win the everlasting gratitude of home builders when they install this ingenious garage door control. Sta-Put is amazingly humanlike. By a slight pull on one door both doors open automatically. Both doors shut the same way. Sta-Put holds doors open or shut in highest wind. Prevents swinging or slamming. Eliminates propping doors to hold them open. Prevents damage to car or garage. Eliminates necessity for overhead and roll-away types of doors. Fits ordinary garage door.

**Costs
Less Than
\$10.00**

Sta-Put Door Control prevents danger of monoxide poisoning through doors blowing shut while engine is running. Dr. A. H. Kegel, Chicago's Health Commissioner, says: "Deaths from carbon monoxide have averaged one a week. The blue smoke from motor vehicle engines in closed garages takes a steady toll of lives and garage doors should always be open while motor is running." Many of these deaths are due to the doors accidentally blowing shut. Sta-Put positively ends this danger. Sta-Put comes completely assembled ready for installation and takes about 20 minutes to attach. Weight 21 lbs.

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DOOR OPERATORS CORP., 1217-1219 W. Monroe St., Chicago, Illinois

**7 OUTSTANDING
FEATURES**

1. Slight pull of one hand operates both doors automatically.
2. Holds doors open or shut in any wind.
3. Does away with necessity for overhead and roll-away types of door.
4. Eliminates danger of monoxide poisoning.
5. Comes completely assembled.
6. Installed in 20 minutes.
7. Pays for itself many times over in saving to car doors, time, temper and inconvenience.

DOOR OPERATORS CORP. Dept. G-1
1217-1219 W. Monroe St., Chicago, Ill.
Gentlemen: Please send me your special offer on Sta-Put Garage Door Control.

Name.....

Address.....

City.....State.....

I am a { Contractor ☐ Dealer ☐ Homeowner ☐ } Check which.

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January, 1929

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Smallest Mesh "Diamond" Metal Lath Yet Made

A new plastering base of extraordinary merit. Which possesses such marked MORTAR SAVING qualities, such definite reinforcing and bonding properties, that it is instantly "accepted" wherever introduced.

With this small mesh KNO-BURN, JR. Metal Lath the plasterer is enabled to do his best work most easily. And the savings of from 4c to 9c per yard, which many contractors are able to effect as a result of certain labor and mortar saving economies in applying the scratch coat, will make every builder eager to give this new lath a trial in his own work.

SAMPLES and circulars are waiting for you. Ask for them.

NORTH WESTERN EXPANDED METAL CO.

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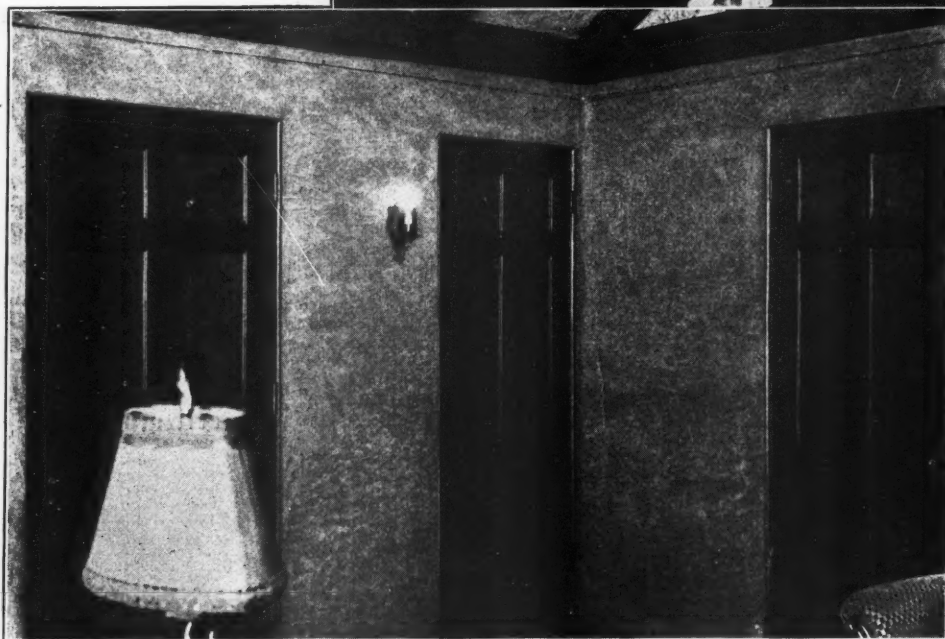
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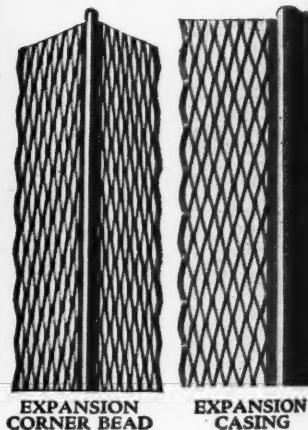
Forms for the February number of the American Builder will close promptly on January 10. New Copy, changes and orders for omissions of advertisements must reach our business office, 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 10th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN BUILDER.

High Grade textured plastering, Expansion Corner Beads at corners and Metal Casings at doors and windows lend great interest to this small Chicago home interior.



If four-inch wood casing were used at these doors a total width of 24 inches of wall area would be taken up with contrasting trim, reducing noticeably the apparent room size.



Small Homes May Be Distinctive

THE interior designing of this Chicago home distinguishes it sharply from many other homes built at the same time. Note that wood trim was not used at doors and windows. Expansion Metal Casings take its place and, finished with the plaster, give each room an appearance of greater wall area, as well as that distinctive style sought by all home owners. Ex-

pansion Corner Beads were used on all plastered corners, protecting them and making each one straight and true. And the textured plaster, reinforced and made crackfree by **MILCOR** Stay-Rib Metal Lath, gives this home the distinction of being firesafe. Any small home may be made distinctive in style and worth at moderate cost with Milcor metal products.

"Modern Modes in Better Plastering" is an interesting book. May we send you one?

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.

Eastern Plant: CANTON, OHIO
Chicago, Ill., Kansas City, Mo., La Crosse, Wis., Boston, Mass., Atlanta, Ga., Detroit, Mich., Minneapolis, Minn.

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STAY-RIB METAL LATH No. 1

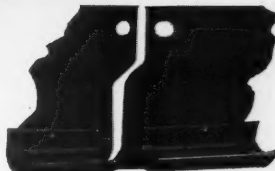
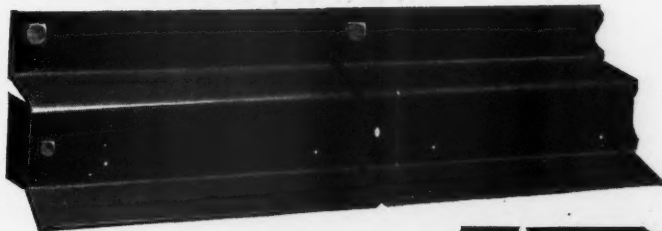
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There's No Other Track Like This On the Market



End View of "Shedwel"
Track Showing Dimensions

Note the telescoping joint
(patented) that greatly sim-
plifies the erection of
"Shedwel" Track and
eliminates the necessity of
using joint-brackets.

"Shedwel" Track No. 222 was designed to provide full weather protection for hanging medium or light weight doors at a minimum of cost. This Track eliminates the necessity of buying a heavy, expensive track for doors that do not require the additional strength of a heavier track but do require the weather protection.

"Shedwel" is a one-piece Track. Is easily installed. With its addition the FRANTZ Line of Hangers and Tracks is complete. From the Line you can select the correct and most economical type of equipment for any door.

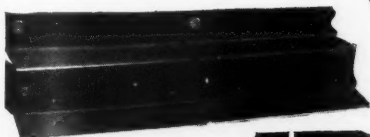
Write Dept. A-229 for a copy of the chart
"How to Select the Correct Hanger and
Track for Any Door."

FRANTZ
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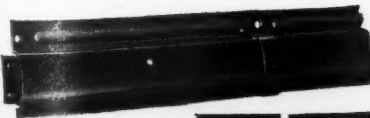
Sterling,
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With every Track
in the FRANTZ Line
you have a choice of
Hangers for adapting
it to inside or outside
sliding or folding doors.

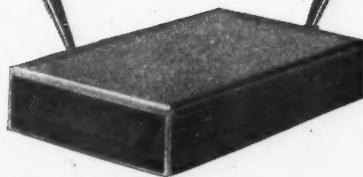
Every Track in the
FRANTZ Line is
made of heavier
gauge stock, will
wear longer and stand
more abuse than the
average type of Track.



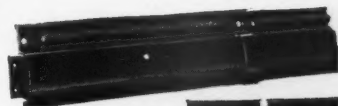
"Glide" Track No. 111
For large or heavy doors.
Perfect weather protection.
One-piece construction.
No joint-brackets
required. Has telescoping
joint feature (patented).



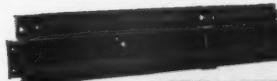
"Hi-Lo" Track No. 666
For large or heavy doors.
Semi-weather protection.
Made in one-piece. No
joint-brackets required.
Has telescoping joint fea-
ture (patented).



No Hardware is Genuine FRANTZ
QUALITY Without the Red Label



"Runwel" Track No. 555
For medium size and
weight doors. Semi-weather
protection. One-piece
construction. No joint-brack-
ets required. Has tele-
scoping joint feature
(patented).



"Rollaway" Track No. 444
For small or light weight
doors. Semi-weather pro-
tection. One-piece con-
struction. No joint-brack-
ets required. Has tele-
scoping joint feature (pa-
tented).

